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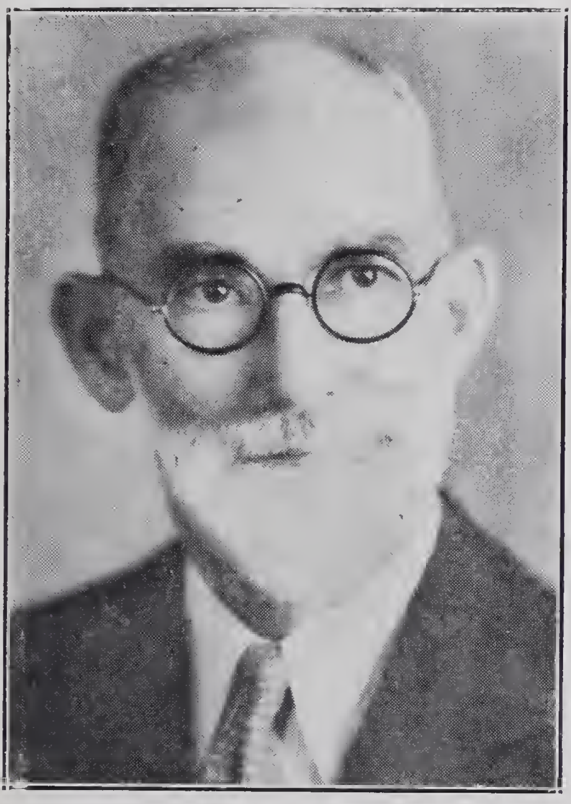

W. L. LITTLE, M.D.
Wesson, Miss.

President-Elect of The Mississippi State

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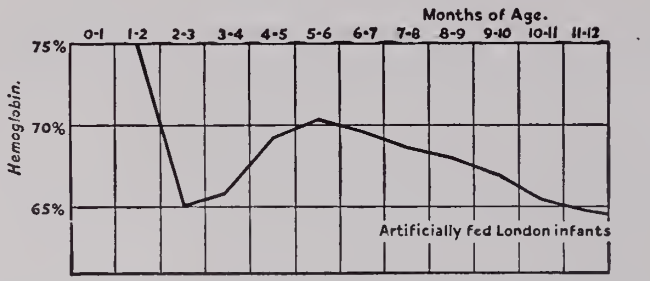
Nutritional Anemia in Infants



Hemoglobin level in the blood of infants of various ages. Note fall in hemoglobin, which is closely parallel to that of diminishing iron reserve in liver of average infant. Chart adapted from Mackay. It is possible to increase significantly the iron intake of the bottle-fed from birth by feeding Dextri-Maltose With Vitamin B in the milk formula. After the third month Pablum offers substantial amounts of iron for both breast- and bottle-fed babies.

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1. The iron stored in the infant's liver at birth is rapidly depleted during the first months of life. (Mackay,[1] Elvehjem.[2])

2. During this period the infant's diet contains very little iron—1.44 mg. per day from the average bottle formulae of 20 ounces, or possibly 1.7 mg. per day from 28 ounces of breast milk. (Holt.[3])

For these reasons, and also because of the low hemoglobin values so frequent among pregnant and nursing mothers (Coons,[4] Galloway[5]), the pediatric trend is constantly toward the addition of iron-containing foods at an earlier age, as early as the third or fourth month. (Blatt,[6] Glazier,[7] Lynch[8]).

The Choice of the Iron-Containing Food

1. Many foods reputed to be high in iron actually add very few milligrams to the diet because much of the iron is lost in cooking or because the amount fed is necessarily small or because the food has a high percentage of water. Strained spinach, for instance, contains only 1 to 1.4 mg. of iron per 100 gm. (Bridges.[9])

2. To be effective, food iron should be in soluble form. Some foods fairly high in total iron are low in soluble iron. (Summerfeldt.[10])

3. Pablum is high both in total iron (30 mg. per 100 gm.) and soluble iron (7.8 mg. per 100 gm.) and can be fed in significant amounts without digestive upsets as early as the third month, before the initial store of iron in the liver is depleted. Pablum also forms an iron-valuable addition to the diet of pregnant and nursing mothers.

Pablum (Mead's Cereal thoroughly cooked and dried) consists of wheatmeal, oatmeal, cornmeal, wheat embryo, brewers' yeast, alfalfa leaf, beef bone, iron salt and sodium chloride.

[1-10] Bibliography on request.

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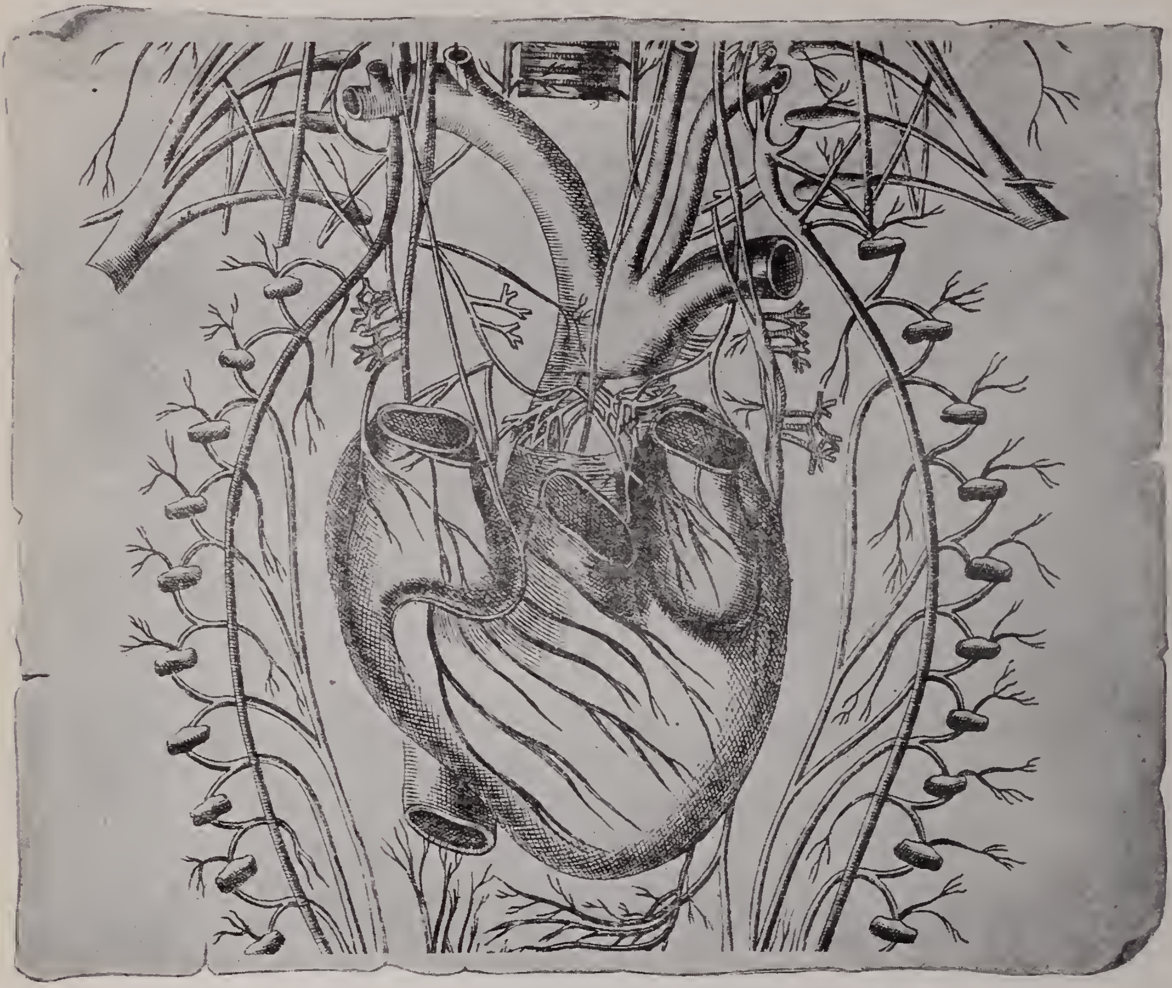

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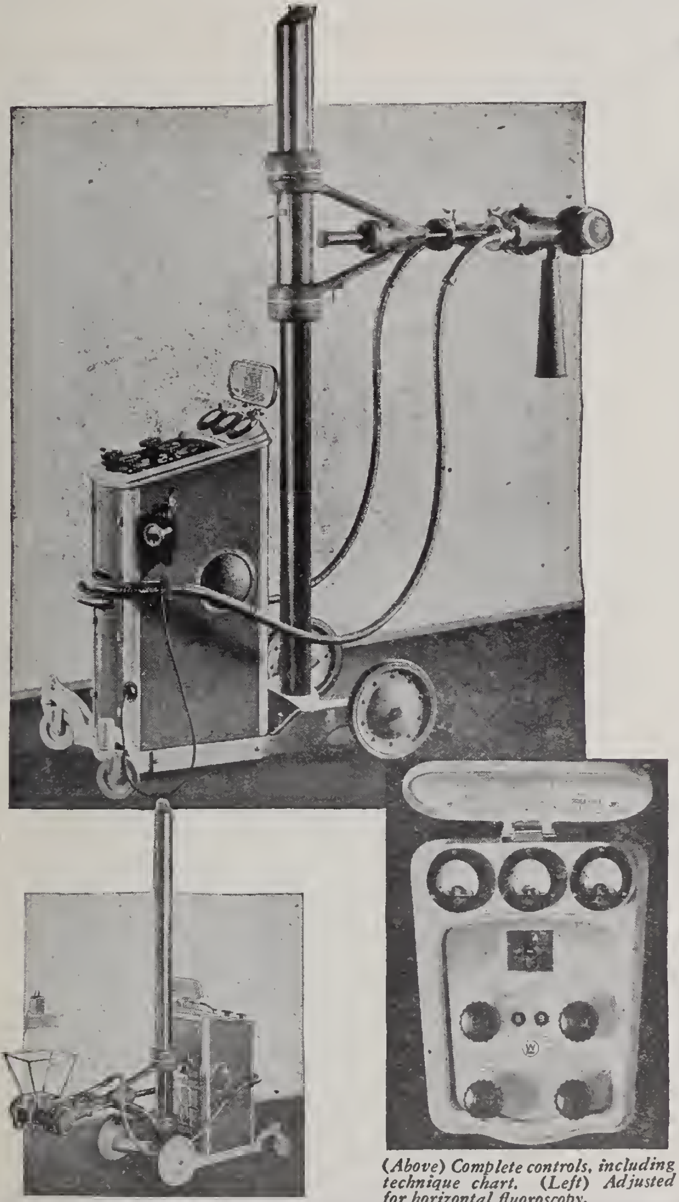

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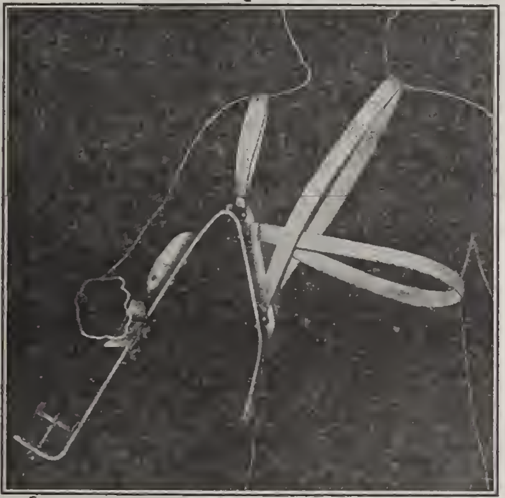

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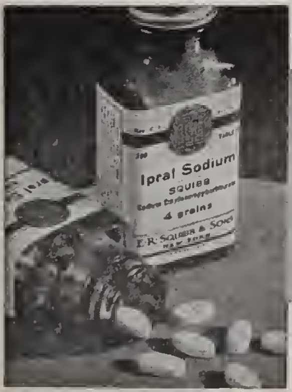

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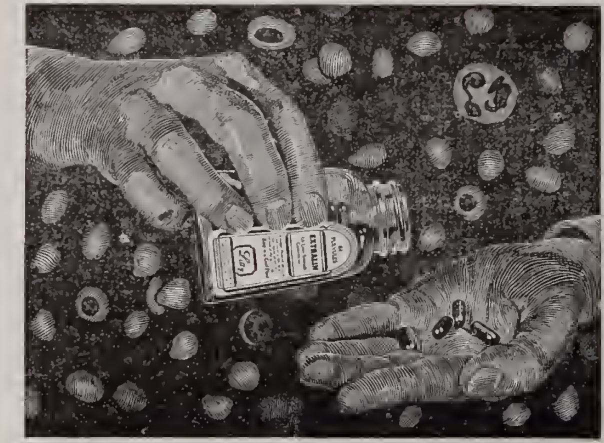

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Observations On the Diagnosis and Treatment of Peripheral Vascular Disease In Man*

E. M. LANDIS, M.D.
Philadelphia, Pa.

Disease of the peripheral blood vessels was first mentioned specifically in anatomical dissertations written during the sixteenth century under the headings "bone-like arteries" and "ossified arteries." Peripheral necrosis or gangrene, which had been described centuries before, was nevertheless at this time still attributed to lack of innate heat, not to vascular disease. The association between gangrene and arterial obstruction was not established until early in the nineteenth century when the phrase "gangrene by obliteration of arteries" entered medical literature along with the term "arteriosclerosis." For some decades thereafter all peripheral gangrene was ascribed to arteriosclerotic occlusion.

In 1862, however, Raynaud observed symmetrical gangrene without arterial pathology and suggested that vasomotor nerves by excessive stimulation of previously normal vessels might lessen blood flow and produce peripheral necrosis. About twenty years later Weir Mitchell described another form of vasomotor disturbance under the term "erythromelalgia" and since 1900 additional types of vasomotor instability have been named acrocyanosis, acroparesthesia and chronic acroasphyxia, titles which are more descriptive than explanatory. It is obvious that these vasomotor conditions were set apart primarily because they were not associated with detectable anatomical changes in the peripheral vessels.

At the same time those peripheral vascular disturbances which were associated with organic changes were subdivided by pathologists into smaller categories. Von Winiwarter, in 1879, separated from arteriosclerosis an inflammatory type of vascular disease, which he designated "arteritis obliterans." Buerger, in 1908, completed the separation and suggested the name "thromboangiitis obliterans" since veins and arteries were often involved simultaneously. Even true arteriosclerosis was further split into sub-groups. Throughout this period advances in knowledge of peripheral vascular disease depended primarily on studies of pathological anatomy.

In the last two decades attention has shifted to the pathological physiology of peripheral vascular disease, involving objective and semiquantitative study of clinical manifestations with attempts to explain the mechanism by which the symptoms and signs of peripheral ischemia are produced. The factors responsible for directing study into this channel are, first, increasing knowledge of normal vascular physiology, second, the development of simple thermo-electric methods of measuring skin temperature and third, advances in the surgery of the sympathetic nervous system. Material, methods and stimulus being available, the rapid accumulation of information is not surprising.

It must be admitted, however, that little or nothing is known concerning the fundamental etiology of the more important peripheral vascular diseases. Familiarity with their abnormal physiology makes it possible to ameliorate symptoms and signs to some degree, but completely successful therapy is lacking and still awaits discovery of the underlying causal agents. It is well to remember also that in peripheral vascular disease the symptoms and signs are peripheral but in many instances the underlying vascular disease is generalized. Arteriosclerotic gangrene is peripheral, primarily because the blood vessels of the extremities are exposed to variations of temperature and to trauma, from which more centrally placed vessels are protected. Even thrombo-angiitis obliterans is often far more extensive than is suggested by its classification as "a peripheral vascular disease."

The local symptoms and signs of the common peripheral vascular diseases are those of abnormal blood flow. Rarely, as in erythromelalgia or glomus tumors, blood flow is abnormally free. There is then excessive warmth locally with burning or neuralgic pain. In the vast majority of cases, however, the circulatory abnormality is in the opposite direction; blood flow is impaired resulting in coldness, cyanosis, stabbing or constricting pain, followed eventually by indolent ulceration, necrosis and gangrene.

The circulation to a limb may be diminished in two ways: first, by structural or organic disease of the vessels resulting in permanent reduction of their calibre—or, second, by excessive narrowing (or spasm) of vessels which are still structurally normal and which, under certain conditions, can be made to expand widely. Given a patient with coldness, cyanosis and ulceration of an extremity the first and essential step for determining diagnosis, prognosis and therapy is to discover whether any structural lesion of the vessels is present, and if so, what is its extent.

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*Read before the 52nd annual meeting of the Mid-South Post Graduate Medical Assembly, Memphis, Tenn., Feb. 11-14, 1936.

This is more than an academic point since conservative therapy yields far better results if beginning organic occlusion is discovered before it has reduced too greatly the normal capacity of the blood vessels to dilate. On the other hand, if organic occlusion can be certainly demonstrated to be so widespread and complete that conservative therapy is hopeless, amputation can be recommended without hesitation and the patient's period of hospitalization will be correspondingly reduced.

Much information can be gained from a thorough history and examination and this can be amplified by using certain objective tests to identify organic changes in the blood vessel walls. The surface temperature of the distal portion of the cool, exposed extremity is measured thermo-electrically. Dilatation of the peripheral vessels is then produced and the coincident rise in surface temperature is recorded. If skin temperature rises to 30.5°C. or more significant organic vascular obstruction is not present. If skin temperature fails to rise to this normal level, the arteries supplying the part are regarded as being unable to dilate owing to organic changes in their walls.

When the vasodilator response is normal or but slightly reduced considerable benefit can be expected from conservative measures producing vasodilatation, e. g. the thermo-regulated cradle, typhoid vaccine, vasodilator drugs or sympathetic ganglionectomy.

In late peripheral vascular disease the arteries become more or less rigid owing to structural changes in their walls. These diseased vessels have not only abnormally small lumina but they are finally unable to dilate even when vasoconstrictor tone is abolished. Under these circumstances the usual conservative procedures cannot be expected to increase blood flow and, in fact, they usually fail to improve the nutrition of the tissues involved. Eventually many of these patients with conspicuous organic occlusion suffer from trophic changes, ulceration and gangrene, leading finally to amputation. Such patients present a peculiarly harassing therapeutic problem chiefly because the usual methods of increasing peripheral circulation depend primarily upon the residual power of vasodilation.

It seemed possible that if blood flow might be assisted in the face of advanced organic occlusion, the developing collateral circulation might have opportunity to restore peripheral flow to a fair state of compensation. It seemed also that this must be accomplished by physical means since the physiological methods of increasing blood flow cannot be effective when organic vascular disease has already destroyed the power of dilatation. That the utilization of pressure changes for this purpose was a logical outcome of general knowledge concerning hemodynamics, normal and abnormal, is indicated by the fact that simultaneously in several localities, New York, Cincinnati and Philadelphia, work of similar nature was planned or in progress.

The extremities of normal subjects were exposed under controlled conditions to intermittent negative and positive pressure. Rise of skin temperature indicated increased blood flow locally. In a series of patients with advanced organic vascular disease it was found that skin temperature could be elevated temporarily, that rest pain could be diminished and that indolent ulcers began slowly to heal.

There was sufficient evidence of the effectiveness of suction and pressure in short period observations to warrant its use in the prolonged treatment of individuals who had failed to improve with other methods of conservative therapy, including the thermoregulated cradle, citrate solution, typhoid vaccine and vasodilator drugs. Negative pressures between 80 and 120 mm. Hg and positive pressures between 40 and 80 mm. Hg were applied alternately for 25 and 5 seconds, respectively, beginning with the lower pressures. Vasoconstrictor tone was lessened by encircling one forearm with an electric heating pad. Patients were treated for one to two hours at first once or twice daily, then three times weekly and finally, as symptoms and signs of ischemia diminished, once weekly. Limited facilities prevented continuing treatment beyond several months. The thermoregulated cradle of Starr was used during the intervals between suction and pressure therapy. Sedatives were prescribed as needed, with the usual advice concerning care of the extremities.

In a series of 75 patients the immediate results were good in 51%, fair in 13% and poor in 36%. Of considerable clinical importance is the persistence of improvement in a limited number of patients over periods of 6 to 22 months after conclusion of suction and pressure therapy. In 50% of those studied (7 of 14 cases) the vasodilator response increased significantly, indicating that collateral blood flow can exhibit considerable recuperative power. It is therefore advisable to temporize in crises of rest pain owing to embolism, thrombosis or indolent ulceration without spreading infection. Collateral circulation may then be able gradually to take over the work of the obliterated vessels, restoring nutrition to a level which, if not normal, is still satisfactory.

During these crises of ischemia, suction and pressure therapy need not displace other effective methods of conservative treatment but can be added to them without difficulty. It has been used in treating lesions persisting after sympathetic ganglionectomy, nerve crushing operations, or even after amputation of digits.

Like many other therapeutic procedures suction and pressure has definite limitations and dangers. It is absolutely contraindicated in patients with phlebitis or with the slightest evidence of spreading infection. Lesions, even the most indolent, must be examined daily so that any spreading infection may be detected immediately. Only in this way will possible injurious effects of suction and pressure be avoided. The therapy should always be applied under the direct supervision of a physician.

Suction and pressure therapy has not been of lasting service in peripheral vascular disease complicated by osteomyelitis, deeply extending gangrene or large sloughs. These patients present mechanical obstacles to healing which surgery alone can deal with effectively. The best results are to be obtained in patients who, after thrombosis or embolism, suffer agonizing rest pain without skin lesions. Concerning its effectiveness as a prophylactic measure little can be said except that suction and pressure therapy used assiduously in the early stages of organic vascular disease seems to delay and may avert the vascular accidents which frequently complicate advancing organic occlusion. Adequate evidence justifying this impression can only be established by long observation.

One is frequently asked to define "the best procedure." It is useless at present to attempt hasty conclusions concerning the advantages of this or that technique. Slow changes of pressure, such as those used by Reid and Herrmann, have certain theoretical advantages but are less efficient physically than the rapid pressure changes used throughout the observations just described. It is certain that if this procedure is found worthy of being used routinely in treating patients, experience and ingenuity will in the course of a few years improve present apparatus and technique beyond recognition.

In summary, it is essential to detect beginning organic vascular obstruction as early as possible in the course of peripheral vascular disease since the therapeutic measures available depend in large degree upon the ability of the blood vessels to dilate. Unfortunately, many patients reach the hospital after peripheral vascular disease has advanced to the stage in which the arteries are no longer able to increase their diameter, though vasoconstrictor tone is entirely abolished. Even under these unfavorable conditions, however, it is apparently still possible to increase blood flow by means of alternate suction and pressure. This procedure elevates skin temperature, tends to relieve cyanosis, diminishes rest pain and favors, at least temporarily, the healing of superficial indolent ulceration. If conservative therapy is used to aid the patient temporarily over crises of rest pain and ulceration, time is gained for the development of collateral circulation. This recovery of peripheral blood flow is slow but, over periods of 6 to 22 months, it has been observed to be capable of increasing the vasodilator response in the lower extremities with persisting symptomatic improvement.

The Indications for Surgery and the Surgical Management of Gastric Lesions*

FRANK H. LAHEY, M.D.
Boston, Mass.

Mr. Chairman, and Members of the Mid-South Post Graduate Assembly:

The subject of ulcer of the stomach and duodenum, and cancer of the stomach, is a large one and a difficult subject to present because it is considerably confused. There is not entire agreement as to its management and there are conflicting views on the subject.

We have reported recently in the New England Journal of Medicine a comparative experience dealing with something over two hundred and fifty cancers of the stomach and with over two thousand peptic ulcers in the hospital, either under surgical or medical observation. As we discuss the subject of peptic ulcer, we ought always to consider what causes it. There are a variety of methods of producing the ulcers in animals. The results that occur in animals do not seem to be of the type seen in humans. The great difficulty with the human ulcer is to make it heal. The great difficulty with experimental ulcers is to keep them from healing. The best experimental ulcers I have ever seen were produced by cinchophen. These ulcers always occur in the ulcer bearing area and are probably the best chronic experimental ulcer that has been produced to date.

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*Delivered before the 52nd annual meeting of the Mid-South Post Graduate Medical Assembly, Feb. 11-14-, Memphis, Tenn. Taken down by stenographer.

Now there are certain things about ulcer that we know to be true, one that duodenal ulcer is much more common than gastric ulcer. Gastric ulcer occurs about one time to nine times as relates to duodenal ulcer, and furthermore, the incidence of hemorrhage in duodenal ulcer is 19 per cent as against 11 per cent in gastric ulcer.

There are certain things about ulcer which while perhaps not causative, are at least related to the maintenance of ulcer symptoms. I have repeatedly said that there is no theory that holds true as soundly in relation to ulcer as that of the acid production theory. Pylorospasm, I think, is the single outstanding feature that is most constantly associated with peptic ulcer, either gastric or duodenal, and I believe is the feature which has more to do with the persistence of ulcer symptoms than any other thing. When one has active peptic ulcer there is practically always associated pylorospasm with hypersecretion and hyperperistalsis and when one relieves a patient of peptic ulcer, either by non-operative or operative measures, then pylorospasm disappears and when it disappears, the patient is relieved of his ulcer symptoms. Now I know of no more graphic way to illustrate this point than by discussing the theory and the history of gastro enterostomy. I would like to make clear that whether one cures a patient of a peptic ulcer, duodenal or gastric, by medical measures or by surgical measures, the method is the same, whether the ulcer is removed or whether it is not removed. These patients who are relieved of their ulcer and their ulcer symptoms and in whom later the ulcer is found healed, have certain constant factors present. They do not have pylorospasms and second, they have low gastric acids.

Now I think that a consideration of gastroenterostomy will bring out the best basic conception of the management of peptic ulcer. When one realizes that gastroenterostomy can and does make duodenal ulcers heal, in the form of an indirect operation with no removal of the ulcer, when one realizes that it will overcome pylorospasm and that it will also lower gastric acidity, with no direct attack upon the ulcer, then I think it becomes evident that the effect of gastroenterostomy is similar to the effect of medical measures.

I am not discussing gastroenterostomy from the point of view of its application in treatment. I would like to discuss that later, rather to lay now the ground work of the cause of ulcer and the management of ulcer.

Now when gastroenterostomy was advised by Braun, it was undoubtedly advised as a drainage procedure. The original conception of gastroenterostomy was undoubtedly not the one which really accomplished the relief which follows the application of gastroenterostomy. In theory it was designed to side track the gastric contents down into the jejunum so that this irritating gastric content would not pass over the ulcer.

Now it is interesting to realize that soon after the introduction of gastroenterostomy, Dr. Cannon, now Professor of Physiology at Harvard and Dr. J. Bapst Blake began the investigation of the efficiency of gastroenterostomy and reported that as an efficient operation it was a failure. They did some experiments on dogs and followed human beings. They reported that soon after the establishment of the gastroenterostomy, instead of all the food going through the gastroenterostomy stoma, it went back through the pylorus and that is true of the patients with an active duodenal ulcer upon whom a gasroenterostomy is done.

What they thought was a criticism of the operation was actually a proof of its value. It is true then when one has an active duodenal ulcer with pylorospasm and gastroenterostomy is done, that in the beginning due to the pylorospasm most of the food goes out of the new opening, but as soon as the gastric secretion is permitted to drain out through the gastroenterostomy, and as soon as the jejunal contents begin to regurgitate into the stomach and neutralize the acid, the pylorus opens. We should realize that the function of the pylorus is a double one. One tends to think of it as a structure which closes the lower end of the stomach so that the stomach contents can be mixed with the juices as they digest. One forgets that one of the functions is not only to close, but to relax the opening and to permit the alkaline duodenal contents to regurgitate into the stomach and neutralize and maintain acid alkali balance. So when one does a gastroenterostomy and the ulcer heals, that is really the result of measures similar to the neutralization measures employed by medical management, and gastroenterostomy. If it were not followed up by such a high incidence of gastro-jejunal ulcer, it would be an excellent operation, relatively safe and simple to perform.

We are apt to think, due to the fact that there is so much disagreement today concerning particularly the surgical treatment of duodenal and gastric ulcers, that no real progress has been made. That is not true. No longer are there two schools of thought as to the management of peptic ulcer. Nearly every one agrees today that peptic ulcers should first be treated medically, and that they approach surgery only through medical failure. No longer do we have two diametrically opposed schools, one advocating surgery and the other medicine.

Most ulcers today that come to surgery have had a reasonably good trial of medical measures. No longer, as evidence of progress, are ulcers following surgical operations discharged with no attempt to manage their postoperative regime. It is generally accepted and practiced, particularly in organized groups, when patients have been operated on to turn them over to gastroenterostomists for careful management of their diet, for a change in their eating, drinking and living habits, for neutralization, for proper feeding, for proper mastication, and most patients are warned that even though they have had the best operation in terms of diminished danger of recurrent ulcer, nevertheless they can not take the same liberties with their stomach that they did previous to operation, and live under the same conditions under which the ulcer was produced.

No longer do we see all gastric ulcers excised because of the danger of malignant degeneration in gastric ulcer. No longer do we hear the dictum that one can treat a duodenal ulcer medically, but that a gastric ulcer is not safe to treat medically, because it will not heal, because there is a tendency to malignant degeneration.

Now if it be true that no ulcers except those which have perforated and those with massive hemorrhage are primarily surgical, then it becomes doubly true that the measure which will settle whether or not the patient with a peptic ulcer comes to surgery, cannot be too good, too adequate, too thorough, too painstaking, and that it must be sufficiently prolonged so that the patient when he does come to surgery has had every chance to obtain a non-operative cure.

We realize that the immediate percentage of cures in non-operative measures is high and that with progressing years the percentage of non-operative cures gradually goes downhill. The results of follow-ups in various clinics throughout the country are about the same. We have reported that at the end of five years, 56 per cent of our patients with peptic ulcer are entirely free from symptoms. Any follow-up, however, of peptic ulcer is an extremely difficult follow-up because of the fact that patients have so many digestive difficulties as the result of emotions, dietary errors and so on, but in terms of what may be considered reasonable normal digestion, 56 per cent at the end of five years under medical management are well.

You can not treat an ulcer patient medically under hit or miss conditions. There are two or three things that I think are true. If some one is going to settle on my ulcer, as to having surgery or medical measures, then I want the best medical measure with every detail that goes with it. Dr. Joslin has taught me some very important things in my years of contact with him and he has taught us that part of the diabetic treatment is related to the education of the patient and that has been best accomplished by group education. We have attempted to accomplish the same thing with ulcer patients. If they are placed in groups on the same floor, if they are placed on a sun porch together, they usually develop a group spirit in the management of these ulcers, which makes them much easier to deal with.

We have frequently reported our opinion as to the indications for surgery in peptic ulcer; they have not changed greatly, but they will always bear repetition. Perforation always will be an immediate indication for surgery. One does not debate the question of surgery with perforation, and perforations are usually so frank, so obvious, that there is very little difficulty in making the decision. There is one point which I have mentioned, which is of value, and that is the value of the bubble of air beneath the diaphragm by means of a flat plate. There are doubtful cases in which one cannot be certain, in which one needs aid before undertaking a laparotomy. In those cases in which there is doubt, not infrequent, a flat plate revealing a bubble of air beneath the diaphragm will be of value and rarely will a duodenal ulcer perforate in the absence of air in the stomach.

One hears a variety of opinions regarding the surgical treatment of perforated peptic ulcer, ranging from simple closure and gastroenterostomy and in the hands of the European men subtotal gastroenterostomy at the time of perforation. My own feeling regarding this problem is that my obligation is to get that patient who is in an extreme emergency through alive, and to delay my approach to the cure of his ulcer until he is in such a condition and at such a time that the risk is less. For that reason, I have always advocated simple closure of the ulcer and the application of a gastroenterostomy only when simple closure of the ulcer obstructs the pylorus.

From the point of view of the surgeon there are one or two problems that occasionally arise.

One is that particularly in peptic ulcers there is often so much induration that the ulcer will not close, that the stitches will not hold. In such cases the gall-bladder may be patched over the ulcer or even in an emergency a rubber tube may be sutured into the ulcer opening producing a gastrostomy and permitting it to close later when the patient has been subjected to adequate medical measures.

If after following medical treatment the patient still has persistent pain there is no debate about the treatment, then the patient must accept pain or surgery and we will discuss later the type of surgery. Pyloric obstruction, on the other hand is often, I think, mismanaged. The only pyloric obstruction which demands immediate surgery is that which is unassociated with ulcer symptoms, that is, the cicatricial obstruction of the pylorus—the result of a scar associated with a healing duodenal ulcer. On the other hand, when one has pyloric obstruction in the presence of active ulcer symptoms, then in many of the cases the obstruction is relievable, and even though that patient has twelve or twenty-four gastric states he deserves a thorough trial of medical management to find out whether or not the active induration can be overcome and the problem approached deliberately and not as an emergency, during an acute active induration stage of the ulcer. For that reason, we believe that pyloric obstruction does not demand immediate surgery, yet on the other hand, we have made more mistakes with pyloric obstructions—we have occasioned more unnecessary delays here than almost any other lesion.

Pyloric obstruction is immediately relieved and stays relieved or reçurs, and if it recurs after relief, it is an important indication for surgery. Those cases of pyloric obstruction that are on the border line frequently encourage you to go on with medical management, with the resultant long period of unnecessary delay. Once relieved and then returning, we believe the pyloric obstructions that are on the border line frequently encourage you to go on with medical management, with the result that there is a long period of unnecessary delay. Once relieved and then returning, we believe the pyloric obstruction then becomes an immediate indication for surgery.

Hemorrhage, I believe, is the best indication for surgery. At lunch today someone asked me when do you operate upon the bleeding ulcer? And I am particularly anxious to discuss this subject, because I believe that two things are true. I believe that patients and doctors accept bleeding ulcers altogether too lightly, and I believe that many patients lose their life unnecessarily from bleeding ulcers. It has been stated that only about 2 per cent of the patients with bleeding ulcers die. That is true if you speak of all the ulcers, but of all our ulcer patients who have bled in the hospital, 5% have died in spite of anything we could do, and I am particularly anxious to establish in your minds that we believe that there are two types of bleeding from peptic ulcer, one the type which occurs now and perhaps again tomorrow morning and may be once again and then cease. The other type is recurrent massive hemorrhage with which the patient will be bled out and die, unless something is done at once. They present two exactly opposite situations; one, the milder type in which the bleeding tends to cease and a major operation is contraindicated because there is no poorer time to operate on a patient than just after he has bled. He is easily shocked. He has not had time to call in his tissue juices to restore his blood stream and he may well not stand the extensive operations which are necessary to control hemorrhage. On the other hand, if he represents the group of patients who go on with recurrent massive bleeding, then any risk is justifiable because if something is not done in this situation that patient will die. How can you segregate them? We have repeatedly said that today by means of transfusion it is possible to put blood into patients faster than they can bleed it out from the artery bleeding in duodenal ulcer about the size of a crow's quill up to an orange wood stick.

It is possible in those patients who are having massive hemorrhage to settle whether or not they are the recurring type who are going to die, and it is in this type that any procedure and any risk is justifiable.

I said in a recent article on this subject that I have experienced all the soul probing emotions that go with the various aspects of this situation. I have done nothing and seen them die. I have waited too long and seen them die, and I have had the experience of operating them early and having them get well, and I am convinced that not again in our experience will we ever let these patients go on and suffer the depressing self-criticism of not at least having tried to control the bleeding with the possibility that the effort might have been crowned with success.

There are too procedures: One can, under local or spinal anesthesia open the duodenum, visualize the ulcer and transfix it with silk suture. With the bleeding controlled and the vascular balance regained, then removal of the pylorus and of the ulcer can be done. Ligature of both ends of the bleeding ulcer can be attempted and I would urge strongly that this requires the finest kind of surgical judgment. One must delay the decision until it becomes obvious that bleeding will result fatally unless something is done, and then no matter how high the risk the attempt to control the bleeding in that case becomes definitely justifiable and a number of lives will be saved that would otherwise be lost.

Now as to malignant degeneration: I know of nothing which has been more erroneous than our attitude as to a possible maligant degeneration of the gastric ulcer. For a number of years it has been taught and practiced throughout this country that all gastric ulcers should be removed because of the danger of malignant degeneration. In a recent editorial on this subject, I said that if all gastric ulcers were to be removed because of the danger of malignant degeneration, the mortality of removal would be infinitely higher than the percentage of malignant degenerations. I do not believe that the percentage of malignant degeneration of gastric ulcer is over 6 or 7 per cent and I believe that by means of a plan which we have advocated and practiced one can preoperatively settle whether or not these lesions are malignant.

Malignant lesions of the stomach are not difficult to diagnose. When you and I can tell that a lesion is malignant with the abdomen opened, the gastroenterostomist and roentgenologist can tell in most of the cases without opening the abdomen. There will be typical features by X-ray and the history will be a progressive one not characterized by remissions and intermissions as is the ulcer history. We believe, therefore, that in patients with gastric lesions in which there is doubt as to whether or not the lesion is an ulcer or malignant, none of them should be explored, because if you explore and you find only a calloused ulcer, you always resect since you cannot tell by feeling of them or looking at them whether or not they are malignant. If now the pathologist reports a benign lesion and the patient dies, your conscience will trouble you. On the other hand, if you put that patient to bed and your conservative measures fail and then you operate him you are justified. We, therefore, insist that these gastric lesions shall fulfill certain requirements. That after rest in bed they must show complete freedom of symptoms, the occult blood shall completely disappear from the stools and that by X-ray the defect shall completely close and such closure that the peristaltic waves pass through the affected area. When these conditions are met almost never will malignancy be present, and when they fail to improve, then one is dealing with an intractable ulcer or malignancy and radical operation must be undertaken.

I have found great comfort in this preoperative segregation of gastric ulcers into those which are healable and those which are malignancies.

We have seen no benign ulcers on the greater curvature. Every lesion here in our experience has been malignant.

The next area as to danger of malignancy is the prepyloric region on the gastric side. It is here one is so apt to make mistakes, particularly in those lesions within the first inch of the prepyloric area. These are particularly apt to be malignant.

Posterior ulcers which have eroded into the pancreas healing and lessened danger of malignancy are those on the lesser curvature where they can unfold themselves and heal as they frequently do.

Now as to carcinoma of the stomach: Carcinoma of the stomach is one of the most backward fields in surgery today. When you realize that most every one has 40 per cent of their cancers of the breast alive and well without recurrence, particularly if operated on early. it shows that cancer is not hopeless.

We have now operated on something over four hundred cancers of the rectum and colon; up to two years ago 54 per cent were operable. Within the last two years, this has been increased to where 70 per cent are operable. We have 42 per cent of our cancers of the rectum and colon alive and well without recurrence over five years, if they have been able to have a radical operation. The mortality has been 10 per cent. When the operability is high, the curability is high and the mortality is low, and we will apply that to cancer of the stomach. Our operability in cancer of the stomach is 22 per cent, our mortality 25 per cent, our curability 10 per cent. That means this is a backward field. Why? Because we have educated people in New England that when they have an alteration in bowel function, and 92 per cent of all people with cancer of the colon have had an alteration, they should investigate it for possible cancer. Indigestion, on the other hand, is such a common ailment and people are so habituated to indigestion remedies that they delay investigation until so often cancer of the stomach is discovered late.

There are other features that make cancer of the stomach a difficult lesion for early diagnosis, a high operability and a higher cure percentage. In cancer of the stomach the gastric acid becomes low and therefore digestive symptoms are not outstanding. Cancer of the stomach produces obstruction late and attention is not early directed toward the lesion. I would strongly urge that one of the ways by which we can make earlier diagnosis of cancer of the stomach is that every patient past thirty-five years of age, who has indigestion of over a week's standing should consult a doctor and raise the question as to whether or not he should not have a gastric analysis and a fluoroscopy of his stomach. When we can get patients to be conscious of the fact that a week's indigestion suggests the possibility of cancer, then we will have accomplished a great deal.

There is another psychological fact and that is this: Doctors do not submit their patients to X-ray sometimes, because they know they will result in a high percentage of negative reports and this will result in a high percentage of critical patients. Now that is quite wrong. Many patients seal their own doom by this attitude. Not until patients who get a negative report say "I am thankful to my doctor for his putting me through this investigation, and I am delighted that I fall in the group of negative reports. If the report is positive for cancer, I am doubly thankful because it makes it possible for me to be submitted to surgery early and so fall in the group of possible cures."

There are two things that we fail to realize in connection with cancer of the stomach. One is constipation. Why should constipation be so frequently associated with cancer of the stomach? Because of the low gastric acid. In nearly every history I have reviewed there are three outstanding things: One is there has always been indigestion over a considerable period of time, which if investigated would have resulted in a diagnosis, and in almost every case there has been a change in the bowel movements. Finally, we fail utterly to do the one thing that is often so helpful and that is look for occult blood in the stools. Rarely will cancer be present when occult blood is not found in the stools if done carefully.

Finally, we come to a matter of the surgery of peptic ulcer, and I would like to say that I do not believe that gastroenterostomy is a justifiable routine operation for peptic ulcer. Now I realize that that is a broad statement. I think it should be qualified. I would infinitely rather do a bad operation on a risky patient and have him live than do a more satisfactory operation and have him die; therefore, one can theorize and say that subtotal gastrectomy is the best surgical measure to be applied to all patients with peptic ulcer; one may say, that these operations in the hands of experienced men will give the best end results to the patients. Where there are low gastric acids postoperatively as follows with subtotal gastrectomy, there will be a low percentage of recurrence. I feel that every one should start out with this conception, that the ulcer patient settles for himself largely what is to be done. If medical measures of adequate character fail, then the patient must accept the risk of surgery. On the other hand, the ulcer patient deserves this chain of consideration: First, the best possible medical treatment and management, second, if any of the indications for surgery arise, an approach to surgery with the idea in mind that the operation most likely to give him a permanent cure of his peptic ulcer is subtotal gastrectomy. The decision, however, as to whether or not the patient is submitted to the best type of operation should be deferred until the risk is carefully estimated and until the abdomen is opened. The ease with which the operation can be done should be determined and the probable degree of risk of the whole procedure should be settled. It is infinitely better, we believe, to do a less satisfactory operation such as pyloroplasty or gastro-enterostomy and have a live patient than to do what may be accepted as the better operation, but not have the patient alive to benefit from it. It is certain that any patient who has any of the indications for operations such as pyloroplasty or gastrectomy should be told that in a considerable measure, whether or not he has a recurrent ulcer postoperatively in the form of a jejunal ulcer, depends largely on how well he takes care of himself and his stomach after the operation is completed. Every patient who has had any type of operation for peptic ulcer should be told that because he has had an ulcer, because he has been operated on successfully and had part of his stomach out or a new opening made he must not think he can resume the eating, drinking and smoking habits under which the original ulcer developed and any surgeon who discharges a patient after such operations is morally responsible to make patients realize this and it definitely becomes the duty of every surgeon to insist that patients, after operations for peptic ulcer, be told that their salvation against another ulcer is a complete change in their habits of living, an accurate adherence to a regime planned to protect them against a possible recurrent ulcer.

Cancer of the Oral Cavity: A Review of Recent Literature With Special Reference To Radiation Therapy*

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Cancer of the oral cavity comprises malignant growths originating behind the vermilion border of the lips and those arising anterior to and from the soft palate. Some authors include cancer of the lips, while others include those of the tonsils and oral pharynx.

These cancers cause 2 to 4 per cent of all cancer deaths(17, 19, 47, 65, 76). Men are 5 to 8 times as often affected as women(1, 17, 47). Negroes are about one third less susceptible than white persons.

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*One of a series of contributed articles.

The Metropolitan Life Insurance Co.(47) has experienced a slight decline, over the past 20 years, in the annual death rate due to oral cancer. Since the disease occurs with increasing frequency in the aged, and since an increasing proportion of the population lives to an advanced age, it seems apparent that oral cancer is either becoming less prevalent, or a higher proportion of cases are being cured; possibly both factors are active.

PATHOLOGY

Most of the intraoral cancers (90% according to Albright,(1)) are typical squamous cell epitheliomas, although a variety of rare and interesting tumors occur in this region. Basal cell epithelioma is practically unknown. Regaud(65) gives the following distribution: anterior two thirds of the tongue, 40%; posterior one-third of the tongue, 18%; the floor of the mouth, 18%; mucosal surface of the cheeks and lips, 11%; the gums and the hard and soft palate, 13%. Cancers arising from the anterior part of the tongue, cheeks, gums and hard palate are apt to be of relatively low grades malignancy (Broder's grade I and II) of slow growth, metastasize late, and are radioresistant. Those of the posterior third of the tongue and soft palate are more often highly malignant, metastasize early and are radiosensitive.

Probably the most frequently encountered non-epithelial tumor is the epulus, which usually occurs before age 40 and predominates among women(17). It develops from the periosteum or peridental structures of the alveolus as a pedunculated tumor which bleeds easily. Generally these tumors are benign granulomas but they may become invasive and metastasize(1| 32).

The oral cavity is sometimes invaded by cancers which arise in adjacent structures such as the pharynx, nose and sinuses, and in the bones of the jaws and palate.

Metastases occur by lymphatic emboli or lymphatic permiation to the cervical nodes(44). Early metastasis is favored by the rich lymphatic supply of the mouth, and the great mobility and traumatism of oral structures incident to mastication and speech. The group of cervical nodes first involved is governed by the site of the primary lesion, but atypical and crossed metastases are not exceptional. Lymphatic involvement below the clavicle and generalized metastatic invasion is uncommon. The neck glands are involved, on the average, by the end of six months(71), but infection is so commonly associated with oral cancer that palpable glands are often present for some time before metastatic invasion occurs. When once the lymph nodes are invaded the prognosis becomes infinitely worse.

ETIOLOGY and PREVENTION

Oral cancer is usually traceable to chronic irritation plus chronic infection. Cancer developing on the tongue or cheek opposite a broken, sharp edge tooth is of too frequent occurrence to be ignored. The same is true of cancer developing under an ill fitting denture. Minute electrical currents generated by the action of saliva with metal fillings and dentures is thought to act as a chronic irritation and is probably the cause of some cancers(66).

It is a common observation that oral cancers develop in mouths that are unclean, either from lack of daily hygiene, the presence of pyorrhea, or both. The tongue, cheek and lips of pipe smokers and tobacco chewers are particularly susceptible to the development of cancer. Syphilis is a predisposing cause of considerable importance although frequently overestimated. The most common precancerous lesion in the mouth is the well known white spot, or leucoplakia, observed on the mucous membrane of the lip, on the side of the tongue or inside of the cheek. They occur most frequently, but not exclusively, among syphilitic smokers. They are analagous to the precancerous keratoses of the skin. They are glistening, white or gray, usually small, patches, often fissured or superficially ulcerated, with a slightly indurated border. Thickening of the base or a papillomatous warty surface should arouse immediate serious consideration of malignant change.

Much can be accomplished in the prevention of oral cancer. Simple daily repeated cleansing of the mouth with any non-irritating solution, and the avoidance of irritating teeth and dentures, are preventive measures of utmost importance. Dentists and rhinologists have a better opportunity than others to observe and advise patients about the prophylaxis of cancer; an opportunity too frequently neglected. The simple leukoplakia is often curable, according to Allbright(1), by the daily administration of one gram of magnesium sulphate in a liter of water, taken as one glass thrice daily. Persistent lesions should be destroyed thoroughly by cauterization.

DIAGNOSIS

Cancer within the mouth is usually first seen as a hard, indurated ulcer, less often as a fissured, palpillary or nodular growth. MacFee(38) stresses the importance of a variety occurring usually on the side or back of the tongue, which infiltrates deeply while presenting little or no evidence on the surface. It is surprising how far cancer of the mouth may have advanced before the patient realizes anything is wrong. Eggers(17) believes this is often because the mucous membrane has become insensitive through long neglect of oral cleanliness, or because of excessive use of tobacco or alcohol. According to Meike(44) symptoms have been present on the average for only 3½ months in 80 per cent of cases at the time when treatment is sought.

It is not uncommon for patients to complain first of a glandular enlargement in the neck. The initial complaint in about half of the cases is of seeing or feeling a lump or ulcer which is usually not painful(44), or becomes sensitive when irritated by highly seasoned foods, heat, cold, etc. Pain is not a prominent feature until deep infection or involvement of bone occurs. Sometimes the earliest symptom noted by the patient is a clumsiness of the tongue in speech or mastication, or a tendency to bite the cheek or tongue. Pain referred to the ear, or deafness is not an uncommon symptom of posterior lingual cancer. Patients often dismiss their symptoms with the assumption that they have "stomach sores" or a bad tooth or a peristent sore throat.

Inspection and palpation will disclose nearly all oral cancers. Palpation with the cot covered finger often affords the more important information as to the extent and depth of involvement. Syphilis and rarely tuberculosis or actinomycosis can cause confusion. A positive Wasserman should carry no weight against a clinical diagnosis of cancer. A biopsy will usually clear up any doubt. Biopsy is advised by most authorities as a routine measure(10, 13,83, 48, 53, 57, 63) because of its important bearing upon diagnosis, and especially on the prognosis and the form of treatment to be undertaken. Most radiologists are convinced that cancers of grade III and IV are radiosensitive.

In the terminal stages of all cases not modified by treatment the local lesion tends to ulcerate and infiltrate deeply and widely, while the glands and other structures of the neck become crowded with metastatic growth and involved by infection in which streptococci play a prominent part. Pain, swelling and foul discharge lead to undernourishment. As cancerous invasion and infection spread the patients often die miserably as a result of sepsis, with pneumonia the terminal event.

SURGICAL TREATMENT

The treatment of intraoral cancer, like that of the lip, must deal with both the local lesion and the neck glands. Because the latter are involved earlier and more frequently than they are from cancer of the lip the glands more often constitute the major difficulty. Preceding any treatment, in order that complications may be minimized, it is highly desirable to clean up or reduce chronic dental and mouth infections. Carious teeth should be extracted if possible, although it may be inadvisable to disturb the local cancer. The short time lost in oral hygiene will be fully repaid. Syphilis should be actively treated but without delaying the attack upon the cancer.

Purely surgical treatment has become well standardized but the results have not been gratifying. The local cancer must be destroyed completely by wide excision, by surgical diathermy(52), electrocoagulation, or by cautery. Destruction must include any bone which may be involved. The neck glands may be treated surgically by complete block dissection of the neck. This is a formidable and mutilating operation entailing a high mortality. Some surgeons advocate its routine application at least on the side of the primary lesion, whether or not nodes are palpable. During recent years neck dissections have usually been performed some time after the attack upon the primary lesion. Since many of these elderly patients are not good surgical risks the operation is often made less complete, especially when the primary cancer is favorable and glands are not definitely involved. Only 6½ per cent of Simmons'(72) series of 763 cases were considered suitable for radical surgical operation.

There is no strict definition of operability either for the local cancer or for the glands. Stout(76) says 40 per cent to 60 per cent of lingual cancers are considered operable. Much depends upon the skill, experience and attitude of the surgeon. It is generally conceded that when the fascial planes of the neck are invaded, the glands large, hard and matted together, surgery is futile or worse.

Recurrences following surgery may appear locally or in nodes of the neck that have been wholly or partially neglected, either by intention or inadvertence. The recurrence will generally appear within the first post-operative year(37). Such recurrence may be treated secondarily, but the prognosis becomes very poor.

The results of purely surgical treatment of oral cancer are estimated by Lane—Clayton(34), from an extensive review of the literature, to afford five year cures in 20 per cent of cases operated upon. The percentage varies greatly among different series. When there are palpable glands and the cancer is of low grade malignancy the five year surgical cures may be 50 per cent or better. These are favorable cases of cancer of the cheek, anterior tongue or gums. When consideration is limited to the more active lesions of the posterior third of the tongue the five year cures are negligible. Simmons(71) gives 66 per cent surgical cures in Broder's grade I, 34 per cent in grade II, 8 per cent in grade III, and no cures in grade

IV malignancy.

RADIATION THERAPY

The literature of oral cancer therapy has been written for several years into the literature of radiation therapy, but has appeared about equally in surgical and radiological journals. In those hospitals and clinics dominated by surgical thought and experience it is natural that radiation has been used conservatively, perhaps grudgingly, or inadequately at times. It is significant that practically no reports on oral cancer therapy appear today which wholly condemn or ignore the importance of radiation in this field.

The preference for surgical measures at the Mayo Clinic is clearly indicated in the 1927 report of Judd & New and that of Figi in 1930(20). Treatment is often supplemented by the use of radiation locally and externally to the neck. Radiation alone is the treatment of choice in the highly malignant cancers of the mouth, and is freely conceded the sole recourse for palliation of the numerous advanced and inoperable cases. In 1935 New & Figi(50) report five year cures on a basis of the number of cases operated upon and traced. For lingual cancer there were 37 per cent, upper jaw and palate 67 per cent, lower jaw 60 per cent, cured for five years or more.

Treatment at the Massachusetts General and Huntington Memorial Hospitals, Boston, has been dominated by surgical thought as prominently as at the Mayo Clinic. The articles of Simmons(68, 72), Lund(35, 37), and Taylor (79, 80) indicate that while local application of radon seeds and surface applications of radium were used, and superficial X-ray therapy was administered to the neck, those agents were not employed consistently, with vigor or conviction. Late reports indicate the employment of deep X-ray therapy and somewhat more liberal use of radium. While this group accords little or no curative value for radiation, palliation and some prolongation of life is conceded. Their five year cures of cases accepted for operation are about the same as those of the Mayo Clinic, namely 30 per cent.

Fischel(21, 23) of St. Louis, has been outstanding in his advocacy of purely surgical radical dissection of the neck. In 1932 he reports that 25 per cent of 32 cases with proved neck metastases were cured five years after such treatment and believes no other form of treatment gives comparable results.

Surgeons very justly decry the inadequate and improper employment of radium and X-ray for early and curable cases which reach them later in a recurrent, often hopeless stage. Assuredly giving some radiation to a cancer is grossly misleading and harmful. Equally as deplorable is negligent surgery, and radiologists have some cause to complain of the surgical failures which come to them for palliation.

Radiologists have made notable advances in treating the local cancers of the mouth. Technique has undergone rapid change and improvement and is not at all standardized at present. In experienced hands the local cures are probably equal to or better than those of surgery. Most radiologists concede to surgery the major responsibility for handling the neck glands when cure is intended, but feel that even here radiation is a valuable addition. Generally it is impossible to introduce enough radiation from an external source (X-ray or radium pack) to cure the primary lesion or the involved glands.

An effective and well established method for treating cancer within the mouth is by contact irradiation; that is, capsules or needles containing radium or radium emanation are held against the surface of the cancer. Grier(28) of Pittsburgh, one of our senior radiologists, describes this time honored method in which relatively thin walled brass capsules are used. The time required for treatment is one to three days. Many oral cancers are locally cured by this method.

A less inflammatory reaction and a more uniform distribution of radiation within the tumor can be obtained by increasing the filtering effect of the walls of the radium capsules or needles to the equivalent of one or two millimeters of platinum. This greatly prolongs the time of treatment, or else increases the requirement for a much larger quantity of radium or radon (the latter is the more economical). Widmann(82, 83) of the Philadelphia General Hospital is one of several using the higher filtration, which he supplements by external irradiation from a radium pack or deep X-ray tube. His experience has been gratifying, although too short for statistical value.

Pfahler(54,59) of Philadelphia, out of a long experience, displays in his several publications the evolutionary changes which have characterized radiation methods. For the past several years he has turned more to the use of highly filtered radium applied in contact with the surface of the lesion. Supplementary irradiation is frequently applied as small units of radium needles, of heavy filtration, inserted into the tumor, together with radium packs applied to the face and neck. Pfahler believes that the maximum amount of irradiation which can be tolerated should always be used, for he does not consider the histologic grade of malignancy a reliable guide in the individual case. This author irradiates the neck intensively, whether glands are palpable or not. When glands are involved he relies solely upon radiation.

In 1934 Pfahler and Vastine(58) report 396 cases of oral cancer treated since 1904. Counting untraced cases as cancer deaths 29 per cent were cured for three years or more. One hundred and fifty-seven cases with palpable nodes were treated according to the more recent methods. Of these 23.5 per cent were classed as recovered. These results, while numerically as favorable as many surgical series, are not to be compared with surgical results, for many inoperable cases were treated by Pfahler, and a few of these were cured.

Regaud, of the Curie Institute of Paris, has had a foremost part in establishing the real value of radium therapy for oral cancer. He has been admirably scientific, conservative and therefore slow to publish results. He seems (Pack,[51]) to favor the use of small unit radium needles, well filtered, inserted throughout the tumor. Four or five days are required for complete treatment. Surface applications and external packs are also used in certain cases. After the primary lesion is healed a block dissection of the neck is performed only if the nodes are palpable and removable. If histologic examination shows the removed nodes were involved by cancer, then the neck is irradiated, usually by a surface pack or a collar of radium. Inoperable nodes are treated only by external irradiation. Roentgen rays are not preferred.

Regaud's report in 1932 (Abst. Am. J. Cancer; April, 1933) is noteworthy because his 436 cases were mostly inoperable and because all cases not known to be living were counted as cancer deaths. Even so he was able to report that 16 per cent of his material was cured for 5 or more years; the most favorable site was the anterior portion of the tongue, 21 per cent; the worst was the posterior third of the tongue, 8 per cent.

The practice of English radiologists(5, 6, 11, 12, 59) seems to be influenced largely by the work of Regaud.

In Europe the Radiumhemmet of Stockholm is notable for its good results with oral cancer. According to Berven(3,4), up to 1921 treatment was first by X-ray followed by heavily filtered contact radium. Since 1921 they have used their 3 gram radium "cannon" (external radium at a distance—teleradium). Resistant tumors have sometimes required a later electrocoagulation, followed by radium needles implanted in the bed of the tumor. The neck is routinely treated by the 3 gram radium cannon (Teleradium). If this does not clear up the glands a complete block dissection is done. Berven reports five year cures as follows: for lingual cancer, 32 per cent; for sublingual, 29 per cent; mandible, 24 per cent; cheek, 32 per cent.

The work of the Memorial Hospital, New York(14, 15, 16, 39, 40, 41, 43, 61, 62, 63, 64) has been of outstanding significance. This institution favors the employment of small gold seeds of radon permanently implanted in the tumor. The number of millicuries of radon which are needed to produce the equivalent of an erythema dose of radiation within a known volume of tissue is a factor which was determined by careful experiments. It is their plan, therefore, after measuring a tumor and estimating its volume as a sphere, to introduce as gold seeds a predetermined dosage of radiation, expressed in terms of erythemas. By skillful insertion of the seeds a uniform distribution of radiation can be obtained. They often add to this dose by applying external radiation, by X-rays or teleradium, extending such treatment over ten days or two weeks. The crucial feature of their method is that they are now attempting to deliver within the tumor not less than 7 and preferably 10 skin erythema doses. Their experience is that such large doses are tolerated by the normal tissues, with eventual recovery, and that when a smaller amount of radiation was applied, recurrence was the rule.

This group prefers to treat the glands of the neck by irradiation, often by insertion of radon seeds after surgical exposure of the nodes. The same requirement for 7 to 10 erythemas applies equally to any involved nodes in the neck.

CONCLUSIONS

Impressions gained from having made this review are dominated by a sense of marked contrast between the simplicity of clinical and the complexity of therapeutic considerations. Here is a cancer, almost invariably of a single histological variety, which is generally not highly malignant, which almost never metastasizes beyond the nodes of the neck, offering no great diagnostic difficulties, and developing in a site where generally it can be seen and felt by anyone, including the patient, who is enough concerned to make the examination; yet oral cancer causes between 2 per cent and 4 per cent of all deaths due to cancer, and the person who develops such a cancer has less than one chance in four of living beyond a year or two. This grave situation must be due in part to public ignorance of the fact that a persistent sore or lump in the mouth demands serious and immediate attention. Some blame probably attaches to those physicians and dentists who see these lesions yet through ignorance or weakness forfeit the patient's chance for recovery by giving him inadequate treatment.

However, much of the gravity in the prognosis of oral cancer arises from the difficulties of therapy which must be carried out in a naturally unclean field, on organs which are necessarily mobile to a degree. There is also the probability or the certainty that cervical lymph nodes are involved. Purely surgical eradication of the local cancer plus surgical removal of a fully adequate portion of cervical lymphatics is beyond the skill of many excellent surgeons and at best carries a high mortality. Furthermore the patient's general health, or his refusal of submission, often limits the scope of surgery. Again, surgeons are sometimes more humanitarian in their intentions than they are judicious in setting the limits of operability. These several factors probably account for the fact that not more than one out of three to five patients surviving surgical treatment live five years or more after operation.

There is considerable opinion favoring the use of radium postoperatively, both for the local cancer and the dissected neck. External radiation of the neck is also employed as a hopeful prophylactic measure, both after dissection of the nodes and in those cases wherein the neck is not dissected. This is accomplished by X-rays or radium packs. Statistical proof of the advantages of such supplementary radiation is either lacking or not wholly convincing. Considered opinion is conflicting, but there is a growing tendency among surgeons to employ radiation to some extent.

Radiation has made more notable progress in the treatment of oral cancer than any other variety except cancer of the skin and the uterine cervix. The local cancer is probably cured as readily by radiation skillfully employed, as by surgery. Radium in contact with the lesion is favored by many while others employ well filtered needles of radium or radon seeds within and surrounding the tumor. The observation of the Memorial Hospital workers is outstanding, that cure results when radiation equal to seven to ten times an erythema dose can be introduced throughout the tumor bearing tissue. This is equally true of the nodes of the neck. The technical difficulties of accomplishing this, especially in the neck, are very great and probably surpass the difficulties inherent in surgery.

A few radiologists have had the courage to treat all cases, both early and advanced by radiation methods alone, without resort to surgical dissection of the neck. Their results cannot be compared with those of surgery, for radiological series include many inoperable cases. Aside from palliation and prolongation of life, however, radiation alone has been able to accomplish 20 per cent of five year cures among unselected cases. Berven(3) and Cade(12) have expressed the hope that with further experience in the use of large amounts of radium at a distance, "teleradium," even better results may be hoped for.

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CENTRAL MEDICAL AUXILIARY

Mrs. Temple Ainsworth was installed as the president of the Central Medical Society Auxiliary at the monthly luncheon at the Edwards Hotel. Mrs. Fred Hollowel is the new vice president. Mrs. Carter O'Ferrell succeeded Mrs. George Riley as secretary; Mrs. J. A. Milne succeeded Mrs. Van Dyke Hageman for treasurer.

Mrs. J. O. Segura is the outgoing president, and has served a full term of an administration that has been full of activity. During her administration many new names were added to the roll and many new projects were undertaken by the Auxiliary.

Mrs. Ainsworth is the retiring vice president.

Mrs. Henry Boswell is the newly elected parliamentarian. Mrs. C. F. McKenzie is the Preventorium chairman of public relations; Mrs. I. C. Huggins, Hygiea chairman; Mrs. T. E. Wilson, press and publicity chairman.

The meeting yesterday was the last one before fall. Mrs. Harvey Garrison, Sr., returned thanks.

The luncheon table was centered with large bowls of mixed spring flowers in pastel shades. There were twenty members present.

The members were: Mesdames Carter O'Ferrell, J. A. Milne, G. Gill, N. R. Curry, I. C. Huggins, George Owens, Noel Womack, F. L. Van Alstine, John Howell of Canton, Harvey Garrison, Sr., H. C. Ricks, J. O. Segura, George Riley, Van Dyke Hageman. W. H. Henderson, W. F. Hand, John Walker and Walton Lipscomb, Jr.

ISSAQUENNA-SHARKEY- WARREN AUXILARY

The Auxiliary gave its annual benefit bridge party for the Preventorium fund on April 30 in the Coral Room of the Hotel Vicksburg. Mrs. B. B. Martin, Sr., was chairman of the committee in charge and reports the party was a huge success, having realized a large sum.

The Auxilary members had their April meeting in the form of a dinner party, entertaining their husbands in the Coral Room of the Hotel Vicksburg on April 21st.

Dr. and Mrs. Hugh Johnston had as their guests Dr. and Mrs. George L. Pattee, of Denver, Colo. There were many entertainments given in their honor.

Several of the Auxiliary members attended the state meeting in Greenville. Among them being Dr. and Mrs. B. B. Martin, Sr., Dr. and Mrs. Sydney Johnston, Dr. Hugh Johnston, Dr. Walter Johnston, Dr. and Mrs. R. A. Street, Dr. and Mrs. W. H. Parsons, Dr. and Mrs. B. B. Martin, Jr., Dr. and Mrs. Leon Lippincott, Dr. Nathan Lewis, and others.

Dr. and Mrs. Preston S. Herring and daughter are leaving Sunday for Trenton, Missouri. Dr. Herring will attend the American Medical Association in Kansas City, while Mrs. Herring and Helen visit their parents, Dr. and Mrs. Greene, in Trenton.

MRS. PRESTON HERRING,
Press and Publicity Chairman

Footnote: The above items should be a part of the Woman's Auxiliary, p. 66, but arrived after that section was made up.

THE MISSISSIPPI DOCTOR

The Journal with a vision, the delivery of modern medicine to the masses at less cost to the individual and more profit to the practitioner. The champion the small hospital, the hub around which this service must be built.

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MILDRED P. ANDERSON, *Assistant Editor*

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We forsook our Northeast Mississippi hills for a few days last month and turned our trusty chariot toward our "Queen City of the Delta" for one of the most enjoyed medical meetings we have ever attended, our sixty-second annual state meeting. It was a rare opportunity, this visit to a flourishing little city set like a pearl in the richest valley in the new world. And when we catch a moment to thumb the pages of memory, Greenville becomes a soothing balm to the country doctor's weary body and frayed nerves. So radiantly festive was this little city that as we recalled the muddy ravages of the inundating flood of 1927, we feel that truly she is not unlike the bird of Egyptian myth which rose from its own ashes to replendent glory; so richly fertile are the lands about her that only the fabulous wealth of the Nile Valley excels them.

Of Greenville's poet, whose exquisite grace of pen we can better appreciate; of her hospitality which epitomizes this term long applied to the South; of her gardens and homes which grace the heritages of generations of culture; of her magnificent auditorium, public buildings, and hotels; of her King's Daughters Hospital which might do honor to a city many times her size; and of the beautiful state park which we would make a Mecca for vacationists and a health resort unequalled in the South—we recount with pride that these belong within Mississippi's borders. For the superb entertainment by the garden clubs of the city and for the extravagant hospitality of the members of the Delta Medical Society and its Auxiliary which gave us the rare trip to Leroy Percy State Park we can acknowledge our sincere appreciation and hope sometime to open our doors with quite as much welcome, though not as royally.

On to Columbus Tuesday, June 16th. It will do you good to breathe the atmosphere of this city for a half day. The culture, learning and refinement of the Old South still lurks there in the stately mansions and in the shade of the spreading oaks. The doctors of that county will give us a most cordial hand. They know how to entertain. Columbus is the home of Dr. J. W. Lipscomb Sr., president of the State Board of Health. He is a wonderful type of the general practitioner. He is able in the practice of his profession, broadly educated, able in native ability, and an orator hard to excel. Our great woman's college, the M. S. C. W. is located at Columbus. You would enjoy taking a look at this plant. This city has two splendid hospitals. And there is Mr. Imes with his outstanding daily. Industry is also taking hold in this old stately and reserved city, bringing about a happy combination of learning and industry.

Cordial congratulations are due Dr. Stacy, our secretary, for the fine scientific program that has been arranged. You would have to travel a long way to beat this line up. Dr. Willis Campbell is the visiting essayist you will note. He is a native Mississippian in whom we feel much prde. His name is well known around the medical world. The Columbus meeting on June 16th you can not afford to miss.

Instead of looking for the biggest specialist in the biggest city of the United States for president of the American Medical Association, let there be a general practitioner from the country elected occasionally. Give due credit to the corner stone of the profession.

The brotherly cooperation of the general practitioner and the specialist, the small hospital and the large, is of the greatest importance.

Dr. Harvey F. Garrison Sr., president of the Mississippi State Medical Association is now actively at the head of the medical ship of state. Dr. Garrison has been very active in the state association for many years, and also in the Southern Medical where he is serving on the council. He has been very active in practice, from a general practitioner to his special field of pediatrics. He is well informed on the medical needs of the profession and of the state medical association. He is a persistent worker. He has the entire state at heart. As a citizen Dr. Garrison is wide awake to every interest. Service to others makes him feel rested. You may look for progress in Mississippi medicine under his leadership. We are inviting him to use the pages of The Mississippi Doctor freely as he sees fit. Our cordial good wishes are with him.

About twenty-five men appear on the program of the Mississippi State Medical Association each year for papers. With twelve hundred membership and taking the list as it comes, every member would have a chance to read a paper in forty-eight years, the timid or mediocre would probably have to practice a hundred years before his time would come. Every practitioner has some idea, some clinical observation, some valuable thought that needs to be passed on. He has something to give and he is lacking something he needs to receive. Hence the importance of the local society. The Mississippi Doctor has seen this need and has been free to publish papers read before local societies. Some of them of course are not as good as the ones read before the Mid-South, but many of the very best papers ever published in this journal were read before local societies.

The association and the laity at Greenville greatly appreciated the address of Dr. Morris Fishbein, editor of the American Medical Journal. He traced the progress in medicine and the changing public in a masterly fashion. He can give you facts and figures and make you like it. He can do more, he can give them to you and make you smile until your risorus muscle is fatigued and your sides are sore with laughter. He is a human philosopher. His sarcasm is as sharp as a two edged sword, his wit penetrates like chloroform liniment, and his smiling and laughing humor bubbles through all the time like a wet weather spring. His entire address was eloquent with facts and medical thought of great value to every doctor. We congratulate President Hill in securing Dr. Fishbein for the meeting.

Just because you mistreat a man, don't keep on trying to find fault with him.

The visiting essayists at the Mississippi State Medical Asociation this year were unusually good. The program was quite well balanced. We need to have some of the best men in the United States or Canada each year. They bring us new ideas. They teach us and they may learn themselves. Then some of our best men are among the best in the world in their field. Some men need to be put on to give them a start. Many men know, but are timid in writing and need to have a start. Every doctor knows something that the other does not know. The swapping of ideas and the human touch are of great importance. Not enough of our men attend the state meeting.

The death of Dr. J. L. Roseborough, of Senatobia, at the age of eighty-one took from our profession one who had served well and long. He served as surgeon for the Illinois Central Railroad for fifty years, fifty-two years of practice at Senatobia and two at Como. This one half century and four years was spent in unselfish service to the people that he loved. He walked and worked with them and for them. He had the professional mind, the medical soul and the missionary heart. He was well trained in medicine. The love of his work kept him fresh and added length of years to his life. Well done was the work of this veteran of our profession. We offer our sincerest sympathy to the Mrs. Roseborough, the entire family and relatives.

Dr. W. L. Little, of Wesson, is the President-Elect of the Mississippi State Medical Association. He has been active in organized medicine in the state association for many years doing well anything he was called upon to do. He is worthy and well qualified in every way to make a good president. He will not leave anything undone to carry the association forward. He is appreciative, courteous and obliging. There will be no fears in following his leadership.

We deeply appreciate the one-fourth page ad from the Medical and Surgical Supply Company, of Corinth. Mr. Whitfield will appreciate your business. He is a nice man with which to deal.

With the well ordered clinic and small hospital the general practitioner can do a better class of practice, can make more money, without increasing the cost to the patient. And this system does no harm to any real specialist.

There are many problems in the medical profession of more importance than the dotting of an i or the crossing of a t in the bylaws and constitution.

The annual meeting of Mississippi State Medical Association in 1906 was held in April at Jackson. Dr. E. H. Martin, then of Clarksdale, was president that year. Probably no more brilliant man has ever served us in that capacity. His address on "The Doctor" was both timely and splendid. It would be well if we could have just such an address at frequent intervals. I think there are four equations that enter into every case of sickness to be considered. They are, first, the patient—next the pathology—next the doctor and finally the doctor's knowledge of medical science. Of these four, Dr. Martin chose to discuss the doctor himself. His discussion was able, interesting and to the point. The program of that meeting was full and its scope was wide. The men presenting papers were among the best in the state and surrounding territory. Dr. Wm. J. Mayo was with us and gave us the last word on surgery of the stomach—that is to say he brought us the latest thought on the subject up to that time. Both the Crislers—J. A. and Julius—as well as our own John Darrington were contributors to the surgical program. Certainly there have been refinements in technique and many advances in thinking along surgical lines since that day, but all in all, that program would stand up pretty well if it should be compared with programs of today. The section on obstetrics was replete with able papers from able men. Among those reading papers and taking part in the discussions were Drs. B. C. Cully, H. A. Minor, H. L. Southerland, J. W. Young, A. G. Payne, E. A. Rowan and others that have passed on. I might mention Dr. J. W. Barksdale and Dr. H. H. Harroldson who are still living. No one who knew these men would dare to suggest that what they thought and said concerning any medical subject on any occasion, was not entitled to thoughtful consideration. I shall not attempt to give a resume of any large part of that notable symposium of thought on that great branch of medicine. But I will pause in passing to say that in the discussion of eclampsia—especially with reference to its treatment—every one of these men acknowledged veratrum as being entitled to a prominent, if not to first, place among the various medicaments. I am wondering why, if it met the indications as well as these men said it did (and it did), so little is said about its use today? I wonder if the medical mind of today may not be atuned to the more spectacular things to such an extent that all prosaic things are now being related to the discard? In my early reading I was impressed with the advice to "grapple with hooks of steel" all things and persons of proven worth. If I were undertaking to discuss the subject of eclampsia and viewing it from the latest proven theories as to its etiology as well as to the most rational purposes to be attained, I think I could show why and how veratrum meets almost every requirement in a scientific and dependable way. I think, too, I could show how, if properly used, it would serve as good a purpose in prevention as in cure. I will say that in order to use this drug properly it must be understood and used boldly. He who is afraid to use it had best not use it at all; for if not boldly used it is useless and might be the cause of failing to do other useful things. Suffice to say I am not ashamed of my faith in this drug; "for I know (in) whom I have believed." At this meeting, Dr. C. C. Bass, a former Mississippian of whom we all may well be proud, went deeply into the hook worm situation. Of course this was a followup of what Stiles had told us two years before. But it was very timely; for he showed beyond peradventure that Mississippi was infested to a fearful extent. He told us that a malady far more disastrous than yellow fever held us in its deadly grasp. He pointed out that by its very insiduousness it had spread and spread until it had a stranhold, so to speak, upon the entire population. But he showed how it might be met and eventually eliminated. There is no way to estimate the value of that talk in both a health and economic way. I wonder if it might not be proper for us to show to the public something of the debt that it owes to medical science and medical men? While the public has a right to expect more of us that we give, we, too, have a right to expect and demand more of it than we get.

One other question was up for discussion and consideration that was of importance. It was the administration of antitoxin in the treatment of diphtheria. This was a comparatively new department at this time. But it must be remembered that in the administration of antitoxin at that time it was thought that the purpose in mind was to treat and dose the patient, rather than to neutralize toxin generated by the bacillus. Consequently doses thought to be commensurate with the age and size of the patient were given at repeated intervals. I wonder if this idea does not to some degree prevail still? It should be realized that a full and adequate dose should be given at the earliest possible moment and if this is done a single dose will suffice.

When and if this shall be read, the 1936 meeting at Greenville will be history rather than anticipation. Many of us shall have clasped hands with friends and looked into eyes that time has made dear to us.

G. S. B.

The doctor should be the greatest social and economical engineer of the human race.

The writer of this editorial has attended many sessions of the Mississippi State Medical Association and has had many delightful and profitable experiences while in attendance upon them. But he feels quite certain that no previous meeting has been more profitable to him nor quite so delightful. The weather conditions were ideal and my two daughters and my good friend Dr. C. E. Boyd were my traveling companions. We drove through the "heart of the delta" and a more wonderful farming section does not exist any where on earth. Too much could not be said as to the charm of this great expanse of fertile land. Yet on our return when we sighted the first range of hill-land, one of my daughters remarked, "Aren't they beautiful? I feel that we are nearing home, they bring a sense of security and restfulness." However this daughter is loud and voluble in her praise of "the delta spirit" and appreciates to the fullest extent the courtesies extended her while there. She (they) expressed great satisfaction at the many expressions of friendship for their "Daddy." I think they have joined the association for life. Neither of them is a quitter. Since I could not go to Kansas City to attend the A. M. A., one of them went as my proxy. She seems to have enjoyed this meeting to the fullest. She says she told those people up there that our Health Director was entitled to the honor of being made Surgeon General but since Mississippi is not a "doubtful state," it is not strange that another was given the honor. However, she met the Surgeon General and has no personal criticism to make. Back to the Greenville meeting—there was a splendid scientific program presented. But since all the papers read will be published in the "Mississippi section" of the Mississippi Doctor, I shall not refer to them in detail. The proceedings of the House of Delegates was most harmonious and much that was worthwhile was done. A very pleasing and gracious thing was the election of Dr. W. L. Little to be president-elect. Dr. Little has been a most faithful and consistent worker for the association for many years. He has never asked nor expected any rewards. He has worked in season and out of season for organized medicine. The honor both timely and deserved.

One resolution that was unanimously adopted is to the effect that no member of the Association shall render any service to the government or any of its agencies for a fee less than the prevailing local rate charged for such service rendered to a private individual. I trust that every doctor in Mississippi will remember that this resolution is binding on **all** as well as upon those that were present and voting. Self respect as well as justice will compel compliance with this resolution. There was one resolution that carried much that was good and wholesome, that was voted down in a very positive way. The reason for its defeat was the very evident fact that an iconoclastic spirit pervaded this resolution. It was evident that good was admixed with evil in the hope that it might prevail. On the whole it was made manifest that ours is not a "bolshevik" but a democratic and representative body. How splendid it is that we can work and dwell together in bonds of friendship and affection, even tho we may not always see things in exactly the same light.

I will not try to give a full account of this great meeting, but I must say that some of my most delightful sensations came from meeting the ladies in attendance. I will mention none of these by name but I want that each one there should know that **she** added much to my joy.

I have kept to the last any reference to the one sad feature of the meeting. This was the absence of our great and genial secretary, Dr. T. M. Dye. His absence was due to a severe illness. Dear old Pal, we missed you and we grieved because of your illness. How sincerely we hope that you may soon be well again. Be this as it may, we all love Tom Dye for what we know him to be. The writer has visited him since returning from the meeting and with emotion and tears had the pleasure of telling his most fascinating wife and other members of his family that their loved one is dear to his heart.

G. S. B.

We received a vital statistics report from F. Michael Smith, of Vicksburg, county health officer of Warren County, that is very interesting and represents an out-lay of a big piece of work. Dr. Smith is one of the most conscientous public health workers that we know. He is doing a work very valuable to medical progress. Dr. R. N. Whitfield is bringing us to realize the great importance of vital statistics, morbidity and mortality reports. His work will be appreciated more and more in the future. It is important to know when and where people are born, the type of sickness they have and the disease causing their death. It takes these facts to give us an intelligent working basis. Through Doctor Whitfield and county health officers like Dr. Smith we are going forward. We should deeply appreciate their efforts.

If doctors would invest more money in office equipment instead of wild get rich schemes they would be better off financially, and their efficiency in service would be multiplied over and over.

West Tennessee Medical and Surgical Association held its forty-fifth Annual Session at Jackson, Tenn., on May 21st with Dr. J. L. McMillan of Decaturville as president. Dr. R. M. Adams of Ripley, Miss., president-elect of the Mid-South Post Graduate Medical Assembly was present and was called on for the annual address. He is an ever-ready when it comes to responding with credit to himself and the occasion. The scientific program follows:

Cardio-Vascular Emergencies, Dr. Tinsley R. Harrison, Nashville.

Some Personal Experiences in the Use of Radium for the Relief of Cancer, Dr. Jere Crook, Jackson.

Early Diagnosis and Prevention of Cancer, Dr. Shields Abernathy, Memphis.

Urological Lesions Found in the Presence of Normal Urine, Dr. Russell Hennessey, Memphis.

Lunch.

Committee Reports. Short Business Session.

Pre and Post Natal Care, Dr. J. C. Ayers, Memphis.

Colitis, Dr. W. C. Chaney, Memphis.

Medical Treatment of Surgical Diseases of the Abdomen, Dr. R. A. Barr, Nashville.

Physiological Principles Applied to the Treatment of Fractures, Dr. Willis C. Campbell, Memphis.

President's Address.

Dinner.

Dr. W. H. Anderson
Booneville, Miss.
Dear Doctor:

We as doctors of Tupelo and Lee County would appreciate it if you would place the following lines in "The Mississippi Doctor," expressing our appreciation for services rendered by them.

Gentlemen of the medical profession of Mississippi, Tennessee, Alabama and whatever other states may have been represented in Tupelo on April 5, 6 and 7, 1936:

"We are taking this opportunity of expressing to each of you our very sincere appreciation for the wonderful medical and surgical assistance given to our people during the tornado of the above date. Without your help we would have been lost. Your motive in coming and offering your assistance impresses upon the world the real object of medicine, rendering whatever services you are able to render to all mankind at any time and in any place. We appreciate your coming and thank you from a very sincere heart for everything you did."

I am,

Very sincerely,
A. J. STACY, M.D.,
Secretary Tupelo Hospital Staff

Before the house of delegates of the Mississippi State Medical Association a resolution was read and adopted expressing sympathy for the doctors of Tupelo because of the tornado disaster. They were commended most heartily for the noble work they did for the injured and the suffering. Admiration for them for their efficiency and their persistency was unanimous. Deep appreciation was expressed to one and all near and far who gave assistance to Tupelo, including Memphis, Meridian and Birmingham. This is said to be the third greatest disaster recorded in the United States. The dead are now probably about two hundred and fifty, the injured reaching into the hundreds, the destruction of property more than three millions of dollars. The response of the nation to this calamity is evidence of the human sympathy that yet lives in the hearts of our people, the love one for the other, the power that makes the world go round. Doctors of Tupelo, our sympathy is with you, our admiration is for you, and our most sincere good wishes are to you.

The following from Dr. R. C. Finlay, of Glen Allan, Miss., was called to our attention some time ago and was misplaced. Dr. Finlay's observations have received considerable approval by other physicians over the state.

"There has lately come to my attention in the A. M. A. current literature a reference to Read's formula for approximating the basal metabolic rate from pulse and blood pressure. It seems to be fairly accurate.

"B. M. R. 75 (pulse rate +74 pulse pressure) — 72. Not applicable in ages under 15 or over 55. Not applicable in systolic pressure over 160. Not applicable in severe cardio-renal in cardiac states basal condition necessary—fasting, etc."

Malaria is still an open challenge to the medical profession. It is by no means conquered.

The majority of people continue to get sick with common every day diseases and die of same.

The successful application of the known medical science is of the greatest importance at this time.

The supreme purpose of the medical profession should be the prevention of the sick patient, next to this is the cure of same.

We need to multiply the practice of gynecology in the country if we are to lower the death rate from cancer of the cervix.

A. Z. DORSEY, M.D.
Troy, Miss.

Doctor Dorsey is president of the North East Mississippi Thirteen County Medical Society. He was born at Smithville, Itawamba County, August 23, 1869. He is a member of the Baptist Church. He holds a B.S. degree from Mississippi Normal and graduated in medicine from Emery University April 1, 1895. He did his finest piece of work when he married Miss Blanche Horton of Troy, December 31, 1895. They have two children, a son and a daughter, Horton Dorsey and Mrs. Lola Rackley, both of whom have reflected honor on their parents and given them much pleasure.

Dr. Dorsey practiced in Arkansas, on the Arkansas and Oklahoma line for five years. He has practised in Mississippi for thirty-six years, a member of the Mississippi State Medical Association and the A. M. A. He has served as president of his county medical society. He took postgraduate work in Tulane in 1906. Dr. Dorsey does a large general practice and some minor surgery. He has large farming interests, is a progressive citizen interested in church and state. He is a safe and sound practitioner and knows his medicine and his patient in all of his relations in life. He is always ready with his fine, loyal, helping wife, to extend a hand of help to the needy, a heart of sympathy to those in sorrow, and a word of encouragement to those striving to go forward in the battle of life. This happy couple are living a life rich in service to their community. You can not know them without being inspired by their nobility of character. Every professional act of Dr. Dorsey is seasoned with a brotherly interest, genuine and sincere.

Program

NORTHEAST MISSISSIPPI THIRTEEN COUNTY MEDICAL SOCIETY

Tuesday, June 16, 1936

House called to order by President, Dr. Z. A. Dorsey.

Invocation by Rev. Duncan Gray, Columbus.

"Essential Hypertension" by Dr. A. E. Brown; Columbus. Discussed by Dr. W. J. Aycock and Dr. W. A. Toomer.

"Methods of Lowering the Mortality in the Acute Surgical Abdomen" by Dr. V. P. Philpot. Houston. Discussed by Dr. P. M. Williams and Dr. R. B. Cunningham.

"Physiological Principles Applied to the Treatment of Fractures" by Dr. Willis C. Campbell, Memphis.

"Relationship of Medicine to the Social Parade" by Dr. J. A. Rayburn, Pontotoc. Discussed by Dr. G. S. Bryan and Dr. J. R. Hill.

Following the scientific program a dinner is to be served at the Gilmer Hotel by the Doctors of Columbus and Lowndes County for the visiting doctors and their wives.

This is introducing you to Dr. Harris Allen Gant, of Columbia, Tennessee. Following is the first installment of a series of articles on yellow fever which should be very interesting to every Mississippian and to hundreds of doctors throughout the United States. We should be very grateful to Dr. Gant for putting this valuable scientific history in form for publication. It is a fine piece of service, a noble labor for the love of the medical profession and others interested in medical history. Four score and four years have not dimmed his intellect nor abated his interest in the field of service near and dear to his heart. Each month The Mississippi Doctor will have an installment until the book is complete.

Yellow Fever In Mississippi 1878-1905

Personal Recollections, Experiences, Reminiscences, Autobiography and History

HARRIS ALLEN GANT, M.D.
Ex-President Mississippi State Board of Health

(First Article)

Explanatory Correspondence—How I came to Write this Story.

In October, 1930, there was a paragraph in the "Evening Tennessean" saying that Dr. E. L. Bishop, Commissioner of the State Health Department, Tennessee, wished to get in touch with any one who had had yellow fever as far back as twenty-five years previous. The item escaped my attention, but my wife, who reads everything in the newspapers, including advertisements, showed it to me the next morning, and I immediately wrote Dr. Bishop, and as a matter of possible interest to him, enclosed the following letter from Dr. H. R. Carter, and also informed him that I had had yellow fever in 1878.

Dr. Carter's letter:

Louisville, Ky.
January 10, 1911

Dear Dr. Gant:

No fear of my forgetting you. The troublous times of '97, '98, and '99 will be remembered as long as I live and the men with whom I worked as long—and I hope longer. Purnell told me just before he died that your health was bad, and I remember what a sufferer from digestive trouble you used to be. Do you know our histories have been somewhat similar since '98? I developed what Osler diagnosed as "Meniere's Disease" in '99 and was invalided, or nearly invalided for a time. Went to Panama and there recovered my health until an attack of grippe followed by myocardial degeneration sent me home, October, 1909. Yet now I am in pretty good health again, and bore a somewhat enormous detail in Russia and eastern Germany last summer, fall and winter, very well. I was looking into the cholera situation, taking measures to protect the U. S. I am not good for fifteen or twenty years more work, however; I should say five. That is where you beat me.

I wish much I could see you, and talk over old times. The work was hard and the anxiety was great, but I am glad to have worked in '97 and '98. First '97 was the strenuous year, '98 was a plaything to it Remember the work at Taylor and Orrwood was the foundation and the necessary foundation of the knowledge of the mosquito conveyance of yellow fever? Is it not a cause of deep thankfulness to know that we have been under God, the means of saving so many thousands of human lives? Your work, not less than mine or Reed's—because unless the people had been handled the right way no trustworthy data could have been obtained from them. This was your work, mine to obtain the data, and correlate it, with what I had picked up before—in thirteen year of "fooling with" yellow fever, and Reed's to apply the experimental test to the deductions. Our lives have not been wasted, old friend, and it has pleased God that we should "serve our generation" and I am proud and glad and thankful and you should be too, if you rightly estimate what you have done.

Remember me kindly to Mrs. Gant, somehow I do not remember the children, although I have a bare recollection of same. I have three, one a physician in Panama, one studying, and one daughter who is not married and lives with me.

Your friend,
H. R. CARTER.

Dr. Bishop showed this letter to Dr. George R. Ramsey, representative of the Rockefeller Foundation, who wrote me on November 11, 1930, as follows:

Dr. H. A. Gant
Columbia, Tennessee

Dear Dr. Gant:

Doctor Bishop has referred your interesting letter of October 24th to me for reply.

I am a field representative of the Rockefeller Foundation, and in connection with other work, I am assisting Doctor W. A. Sawyer in obtaining specimens of blood from individuals who have had yellow fever. Although I cannot give an exact date at this time, I should like very much to call on you at Columbia during the next week or ten days, and at that time can arrange for taking the specimen of blood. However, I shall consider it a great privilege to talk with some one who has worked with Doctor H. R. Carter in his early days.

I wonder if you would allow me to send a copy of your letter from Doctor Carter to his daughter, Laura? I am sure she would be very much interested in seeing it.

Hoping to have the pleasure of meeting you in the near future, and thanking you for your cooperation, I am,

Very sincerely yours,
GEORGE H. RAMSEY

Doctor Ramsey called to see me, secured a specimen of my blood, and forwarded it to the Rockefeller Foundation, and Doctor Sawyer through Dr. Bishop made the following report, January 29, 1931:

January 29th, 1931

Dear Dr. Gant:

The tests of the sera which we received from Tennessee have now been completed. If there was any serum left after the test in a monkey, it was used in a protection test in mice, but we consider the results in monkeys as more reliable than those in mice, as the latter test is still in the experimental stage and we are only now developing the optimum technique. However, the results in mice were usually in agreement with those in monkeys and had value as confirmatory evidence. You will be interested to know that your serum, when injected into a monkey, protected the animal completely against the yellow fever, and also showed protective power in mice.

Technique of protection in monkeys: Macacus rhesus monkeys were used, one in the test of each serum. The serum was injected intraperitoneally, and about five hours later a subcutaneous injection was given of 0.4 cc. of yellow fever virus of the Asibi strain which had been stored in the dried state. The surviving animals were observed for 30 days. In the absence of protection, the animals came down in a few days and died, usually within a week of the inoculation.

We expect later to bring together in a publication all our experience with sera from persons who had yellow fever many years ago.

I wish to thank you for furnishing a specimen of blood for use in our tests.

Sincerely yours,
W. A. SAWYER.

On January 23rd, 1931, Dr. Ramsey wrote me as follows:

Dear Dr. Gant:

Since discussing my visit to Columbia with Dr. Sawyer, Dr. Bishop and others, it has occurred to several of us that an article, or a series of articles, on your work in the prevention and control of yellow fever would be of very great value.

We are wondering if you would be willing to write such an autobiography, giving your own experiences and as many personal details of your association with Dr. Carter and others as you desire. It has been suggested that this plan can be carried out by assigning the secretary of the County Health Department to you for a few hours each day. You could then dictate to the secretary, at your leisure, such material as you wished and the whole finally assembled into an article, or a series of articles. Financial arrangements whereby this plan can be carried out have already been completed so that, provided it meets with your approval, I would suggest taking up the matter with Dr. Bishop.

I shall not be in Tennessee until about the first of March but at that time I will surely call on your personally. I hope that you will consider the plan of setting down your reminiscences as feasible. I am sure that such an autobiography will be a very valuable contribution to the history of yellow fever in the United States.

Yours sincerely,
GEORGE H. RAMSEY

Also on January 31st, 1931 the following:

Dear Dr. Gant:

Your letter of January 29th has been received, and I am very happy to know that you are willing to undertake the task of writing up your experience in yellow fever work.

As to the type of article, or articles, to be finally written it does not seem to me that that need concern us at the moment, nor do I feel that you need to be at all concerned about introducing as much of your personal experience as you care to. For the time being a good plan might be to assemble such material as you have at hand and dictate to the secretary in a form of rough notes. The material can readily be assembled, some plan of arrangement decided upon and gaps filled in.

What arrangements can be made regarding the proposed trip to Mississippi I am unable to state at the present time.

A photostat of one of Dr. Carter's papers was mailed to you on yesterday. The second paper on extrinsic incubation was published in the New York Medical Journal in 1900. I presume that this Journal would be available at the Vanderbilt Library. They might also have the New Orleans Medical and Surgical Journal in which so much of the yellow fever work in the South was published. Dr. Carter's book is now on the press and will probably be available within the next three of four months.

I am looking forward to the opportunity of discussing all of these matters with you in March. During all of the month of February I can be reached in care of the State Department of Health, Montgomery, Alabama.

Yours sincerely,
GEORGE H. RAMSEY

I had also the following letter from Dr. Sawyer:

February 13, 1931

Dear Dr. Gant:

Thank you for your interesting and entertaining letter of February 6.

Your question about the nature of the immunity of persons who seem to escape yellow fever although frequently exposed, is not an easy one to answer. I think that most of them undergo a light infection which is not recognized. Since the development of laboratory tests we recognize many cases of yellow fever which are light and quite typical. There may be very little fever, absence of albuminuria, no vomiting, and absence of jaundice. The attack may, nevertheless, be yellow fever as proven by tests of the serum before and after the attack. In some of these very light cases the disease can be carried over in monkeys by inoculation of the patient's blood during the first day or two of the illness. If the persons are immune because of earlier experience with the disease, however light the infection may have been, their serum should protect monkeys against inoculation of yellow fever virus at least for some years after the attack.

I am very glad that you have consented to write an account of some of your experiences with yellow fever. I am sure Dr. Ramsey will have ideas as to the best way of arranging the information when he sees you in March. My only suggestion would be to place the emphasis on first hand observations and personal experiences. These would be, it seems to me, more valuable than any other contribution you could make.

Sincerely yours,
W. A. SAWYER

So in my 81st year, and after the lapse of from 34 to 53 years, I am undertaking to put in the record, some of my experiences and work with yellow fever. This story must necessarily be in a measure personal and reminiscent, but at the same time I hope it may be of some scientific value.

The Mississippi Doctor is interested in the welfare of every doctor in the state and is striving to help him in any way possible.

President Tennessee State Medical Association

W. L. WILLIAMSON, M.D.
Memphis, Tenn.

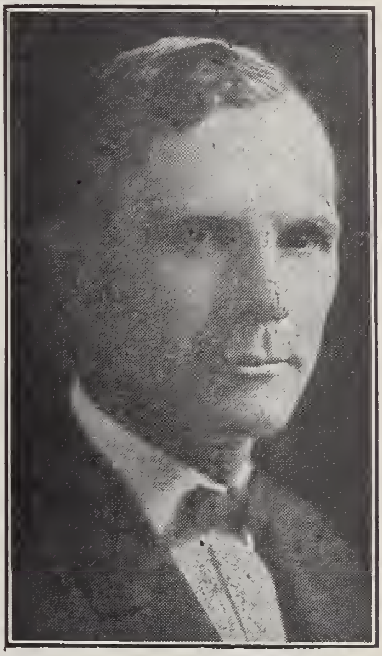
Dr. W. L. Williamson, of Memphis, was unanimously elected president of the Tennessee State Medical Association at its one hundred and third annual session which was held in the Bluff City, April 14, 15, and 16th. To be elected without a dissenting vote was record for the presidency. Dr. Williamson has been very active in organized medicine for many years. His warm and genial hand will be recalled by many who attended the Mid-South. He is commanding in appearance, courtly in manner, and magnetic in personality, a happy combination of the practical and the scientific. We were delighted to have him look in on us at Greenville. Congratulations to him and to the Tennessee State and cordial good wishes to both.

Examination Notice

The Mississippi State Board of Health will hold examinations for license to practice medicine, at the new capitol, Jackson, Miss., on June 22 and 23, 1936. Examination on first two years—June 22. Send or bring certificate for verification. Examination on last two years—June 23. Send or bring diploma for verification.

Write for application blank to R. N. Whitfield, M.D., Assistant Secretary.

Secretary–Mayor



This is Doctor T. M. Dye of Clarksdale, Secretary Dye, Mayor Dye. We congratulate him. The entire profession of the state is delighted to know that he is improving following two operations at the Culley Hospital at Oxford. Dr. Dye could not attend the state meeting at Greenville because of his illness, mastoid. He could not be re-elected secretary since he was not present according to the laws of the association. Dr. Sims was elected in his stead. He immediately resigned and President Harvey Garrison appointed Dr. Dye. While he was yet in the hospital at Oxford an election was held in his home town, Clarksdale, and he was the winner over two opponents. His home town believes in him. His state medical association believes in him. He is able in his profession and he is a citizen patriotic to the core. As secretary of the state medical association he is the essence of efficiency, and he is courteous and he is diplomatic. The medical profession and the people of Mississippi are wishing for Dr. Dye a complete and a speedy recovery.

It is important to know the patient in all of his relations to life as well as the bacteria attacking him.

Dr. J. L. Roseborough

Death came to Dr. J. L. Roseborough at the Baptist Hospital at 2:22 o'clock Wednesday afternoon, after a long illness.

A life of unselfish service to the people of this section has ended, for Dr. Roseborough had served in the medical profession for many years. He was 81 years of age.

Native of Sardis, Miss., Dr. Roseborough attended the University of Virginia and received his medical degree from Vanderbilt University. He interned in St. Louis and took postgraduate work at Bellevue Hospital in New York in 1891.

He practiced for two years at Como, later moving to Senatobia, where he followed his profession for 52 years, until ill health forced his retirement two years ago. He was physician and surgeon for the Illinois Central Railroad for 50 years.

He leaves his widow, Mrs. Ida Garrott Roseborough, three daughters, Miss Dorothy Roseborough, Senatobia, Miss., Miss Marguerite Roseborough and Mrs. Charles Cash, Memphis, two sons Dr. W. D. Roseborough, Sanatorium, and J. L. Roseborough, Jr., Nashville, Tenn., three brothers, W. B. Roseborough, Senatobia, the Rev. J. W. Roseborough, Deland, Fla., J. C. Roeborough, El Paso, Texas, two sisters, Mrs. J. B. Wylie, Washington, Pa., and Mrs. J. V. Taber, Bronwood, Texas, two grand children, Frances and Charles Cash, Memphis, Tenn.

Book Review

Allergy of the Nose and Paranasal Sinuses by Hansel, Assistant Professor of Clinical Otolaryngology, Washington University School of Medicine. The book carries fifty-eight text illustrations and three plates. It contains eight hundred and twenty pages. Dr. Hansel takes up first the fundamental principles of paranasal sinus disease, and then the physiology of the nose and sinuses, biochemistry of the secretions, bacteriology of the nose, cellular reactions in allergy and immunity, histology and histopathology, relation of allergy to other conditions of nose. He discourses clearly in a systematic way until every phase of the subject is covered. This book should be read by the otolarynologist and the internist. It should be a great help to bring them to a middle ground on an important and difficult subject. Allergy is a subject that is baffling to the specialist and to the general practitioner. Dr. Hansel's fifteen years of clinical experience in allergy fits him well with more authority than the average. This book is published by the C. V. Mosby Company of Saint Louis and the price is ten dollars.

Book Review

The Second Edition of the **Examination of the Patient and Symptomatic Diagnosis**, by John Waits Murray, M.D. is available now by the C. V. Mosby Company, Saint Louis. It is really the Clinical Bible for the general practitioner. Dr. Murray's interpretation of the physical findings and symptoms can not be surpassed. He has the happy faculty of stimulating thought and sharpening your observation, as he interprets. Under section I history taking is discussed, beginning with a general consideration ond leading to the individual with all the systems of the body. In section 2 he takes up diseases of single organs or systems of the body, following a definite order for each suspected one. He really takes the patient in his life setting, in his relations to his environment, and systematically step by step, weighs the history, each physical and laboratory finding, and interprets each symptom. This book is indeed one that the general practitioner can ill afford to be without. You will find it an every day friend of great help.

Send your order to C. V. Mosby, Saint Louis. The price is ten dollars.

The Summer-Time Use of Mead's Oleum Percomorphum

During the hot weather, when fat tolerance is lowest, many physicians have found it a successful practice to transfer cod liver oil patients to Mead's Oleum Percomorphum.

Due to its negligible oil content and its small dosage, this product does not upset the digestion, so that even the most squeamish patient can "stomach" it without protest.

There are at least two facts that strongly indicate the reasonableness of the above suggestion: (1) In prematures, to whom cod liver oil cannot be given in sufficient dosage without serious digestive upset, Mead's Aleum Percomorphum is the anti-ricketic agent of choice. (2) In Florida, Arizona and New Mexico, where an unusually high percentage of sunshine prevails at all seasons, Mead's Oleum Percomorphum continues increasingly in demand, as physicians realize that sunshine alone does not always prevent or cure rickets.

Mead Johnson & Company, Evansville, Indiana, invite you to send for samples of Mead's Oleum Percomorphum for clinical use during the summer months to replace cod liver oil.

When Drunk?*

R. C. SMITH, M.D.

Drew, Miss.

There has never been a time in the history of America when its people were on a greater debauch than the period we are going through now. Why discuss this subject? Because it is so stupendous, so far-reaching, and so staggering in its study until we wonder if we are capable of giving it due emphasis. The drunken person filled with alcoholic beverages gets plenty of notice. He is shunned socially, discounted intellectually, and a source of danger to life and property. No daily paper has a news account without some notice on this subject. It is claimed that a large per cent of all auto accidents are traceable to drivers or occupants who are drinking. More boys and girls were said to be killed in auto accidents in 1935 than died from the dread diphtheria, scarlet fever, and typhoid. Then if a large percent of drivers are drinkers, why not study this subject for a short time?

The word, **drunk,** is defined as "one overcome by drinking, intoxicated, inebriated, drenched, or saturated with moisture or liquor; the state of being overpowered by alcoholic liquors; disorder of the faculties, etc." The person I wish to consider in this paper is not the one so defined technically, but the one who imbibes and through the physiological effect of the alcohol reaches the incapacitated state, which we term DRUNK, but few ever admit being intoxicated and the most dangerous person at the wheel of a motor vehicle is he who is buoyed up to be simple enough to think himself the only expert so performing. Likewise, the one accustomed to taking the wise cracks in company; the surgeon who is so affected might term himself skillful, or in such a state a physician might like to discuss with a Kolmer the microscopical findings in pathological conditions or sensitivities, and desensitization with a Balyeat.

Butler in "Materia Medica and Therapeutics" says "The chief action of alcohol is on the nervous system." He describes its effects as "(a) the highest cerebral centers first show the toxic effects (b) the motor conducting neurons come next under the effect of the alcohol (c) the sensory centers then succumb and (d) finally the medulary centers of respiration and circulation are markedly involved."

Musser in "Internal Medicine" gives special emphasis on diagnosing acute alcoholism and says that uremia, apoplexy, injuries of the head, such as fractured skull, remaining undiagnosed have diastrous effects.

F. F. Young, of Covington, Louisiana, says, "Symptoms in acute alcoholic cases as well as chronic are: odor of breath, dilated pupils, flushed face, hot skin in some, and cold and clammy in others, rapid and full pulse, thick speech and various moods—some happy, some quarrelsome. These symptoms tell the tale too well."

Anders' "Practice" says, "Alcoholic inebriety is defined as an acute or chronic intoxication due to the abuse of alcohol. It is a general degenerative condition particularly of the brain and nervous system, characterized by a moderate or excessive, continuous or periodic—, craving for alcohol leading to drunkenness." Chronic manifestations will not be discussed at length. Merria-a-potu (craby drunkenness) alcoholic melancholia, delerium tremens, alcoholic paresis, etc., are those manifestations found where one continues to imbibe alcoholics for some time or a long period of time. Symptoms such as impairment of digestion, a coated and tremulous tongue, foul breath, vomiting before breakfast, gastric distress after eating, muscular tremors, insomnia, hurting of the moral sense, are all familiar as alcohol dims the perception, confuses the judgment, paralyzes the will, and deadens the conscience.

From a medico legal standpoint, physicians are called upon to render opinions far reaching and should therefore be studied with care. Peterson and Haynes give much thought to this subject and much space in their discourse on the inebriate and his contracts, inebriety and life insurance, wills, marriages, torts, divorces, and crime. "A great proportion of all crimes committed are perpetuated during or because of some form of inebriety." Sacks states that in Germany fully 50 per cent of all crimes are committed under the influence of alcoholic excesses. In England and America the percentage is no doubt equally high. Whether inebriety may be interposed as a valid defense for crime depends entirely upon the character and degree of intoxication, and the relation which the particular instance of drunkenness bears to the crime committed. Thus in some cases the offense may be aggravated by the fact that the perpetrator was intoxicated. Again inebriety may be no defense at all or it may be a complete defense.

As physicians, we are employed by insurance companies to make physical examinations for them and to gather facts from examinations and render opinions as to the applicant's insurability. About the usual questions asked are: To what extent do you use alcoholic beverages?

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*Read before the Delta Medical Society, Cleveland, Miss., April 8, 1936.

Have you been intoxicated within the past five years?

Daily quantity of malt liquors, wines, spirits, etc.?

The usual answer is "Oh, I rarely drink anything!" "Sometimes a little drink with the boys." If one accepts such, it is the applicant s opinion that he is temperate. Such is not wanted by an insurance company. If it is your opinion that he is temperate, the company may accept that. Remember our experiences and observations of the past few years leads us to be careful when an estate's interest and an insurance company's interests cross. The companies pay you for an honest, careful, and intelligent examination and opinion. This is your duty and obligation. But when you come to fill in a death certificate and render an opinion it should be in the interest of the one whose interest you look after until death do us part, and his dependants afterwards.

On account of drunkenness and tragic deaths insurance companies withheld from writing insurance in this immediate section —about thirty years past. It took answering many questionaires, letters, and contacts to overcome this. A small part in this restoration was taken by the writer and others such as the late Doctors Southerland, of Benoit, Martin, of Clarksdale, Alexander, of Tunica, and Harrison, of Clarksdale.

We have made certain definitions. and given certain opinions of various authors to portray the effects of alcoholics when taken. Now we shall discuss what quantities taken will render a normal human being drunk or under the influence of alcohol. I here quote from:

DRINKING DRIVER MORE DEADLY THAN DRUNK

By DR. MORRIS FISHBEIN

Almost 40,000 people killed and nearly a million injured every year! That is the toll of motor accidents in the United States of today.

The greatest menace in this reign of slaughter is the drinking driver—not the drunk, mind you, according to one high authority—as extensive experiments show.

When your car is moving at a speed of 60 miles an hour, you are traveling 88 feet a second. A person reacts in about one-fifth second to what he sees or hears, psychologists reveal. This is known as the reaction time.

When the mind is controlled by alcohol, this time may be slowed to two-fifths second, or even much slower.

If you lose one-fifth second in deciding what to do, you have traveled 18 feet, or 36 feet if you lose two-fifths second. Either of these distances may mean the difference between safety and crippling or death.

* * *

EFFICIENCY LOWERED BY WHISKY

In Milwaukee, a doctor tested the effects of small amounts of alcohol on a number of people to determine what the alcohol would do to their minds.

Each was given about an ounce of whisky. Every one suffered a remarkable loss of efficiency. Even when apparently able to do mechanical work more rapidly, he did so at the expense of accuracy.

In another experiment a device was used to measure the time that elapsed between a signal and the application of brakes. Four ounces of whiskey was given.

Those who had this amount were able to pass the ordinary tests used to determine drunkenness, and were able to perform adequately the routine actions involved in driving, but they were not able to do so as well in avoiding obstacles placed in the road, backing the car, and using the emergency brake rather than the foot brake.

Reaction time was increased in every one of them, even though, the alcohol taken was well under the limit necessary to produce drunkenness.

Dr. Herman A. Heise, who conducted these experiments, considers them actual proof that it is not the drunk who constitutes the greatest menace, but the drinking driver.

It is apparently a mistake to consider a person sober as long as he can still talk and walk. We have to know just how much alcohol he has had to know the extent to which the alcohol is responsible for motor accidents.

* * *

NEEDLE THREADING INTERESTING TEST

To show what effects a small amount of alcohol will have, one man was able to thread 180 needles in 20 minutes at 10 o'clock in the morning. He did this over and over for 14 days.

Then at 11 o'clock on the night of the 14th day, he drank about 1½ ounces of whisky. The next morning he tried to thread needles again, 11 hours after drinking, and continued this for 10 days. His efficiency in threading needles was 6 per cent less after taking the alcohol.

In Stockholm, Sweden, where they determine the actual amount of alcohol in the blood, 41 per cent of all men admitted to the hospital because of accident injuries were found to have alcohol in the blood.

In Great Britain, where the motoring problem is coming to be as threatening as in the United States, authorities feel that it is just as culpable under present crowded conditions for me to drive motor cars while drunk as it would be for an engineer to attempt to run a train while under the influence of alcohol.

When the question was referred to the Medical Research Council it brought out the opinion that the direct effect of alcohol on the nervous system is, in all stages and upon all parts of the system, to depress or suspend its functions; that it is, in short, from first to last a narcotic drug.

This distinguished body of scientists felt that alcohol led many persons to take risks and to make rapid decisions less judiciously than they would otherwise.

* * *

DRIVER SUFFERS FROM DELUSION

The taking of even small amounts of alcohol was found to impair both mechanical skill and intelligence and to reduce speed. Interestingly enough, the person concerned always feels that he is doing better than normally. The committee found that alcohol, in amounts of two or three ounces of whisky, is very detrimental to rapid and accurate coordination, and will invariably depreciate driving ability.

The most recent scientific report, that of the British Medical Association Committee, pointed out that it is almost universally agreed that the first effect of alcohol, and the effect of the smallest doses, is upon the higher functions of the brain.

When alcohol is taken into the body, it is eliminated slowly. The body oxidizes it at the rate of about one ounce of whisky an hour. This rate is not increased even when the concentration of alcohol in the body is raised by drinking larger quantities. The effects persist and may be responsible for a motor accident long after the alcohol is first taken.

* * *

HOW TO TELL IF DRIVER IS SAFE

How are you to tell when a person is intoxicated and unable to perform suitably in a motor car?

A very simple test is to ask him to touch his nose with a finger of both the right and the left hand. Ask him to take a key, walk across the room and unlock a door and then bring the key back.

In this way you may learn whether walking is normal and straight, whether there is bumbling with the lock, and whether the person can turn without becoming confused. Ask him to talk or read and see whether he slurs his words or stumbles in reading.

These simple tests will frequently determine whether it is safe to let him drive. If not, make up your mind not to ride with him—and stick to your decision.

Today the number of deaths from motor vehicles is greater than that of suicides and murders combined. More accidents take place during late fall and winter than in summer and spring, even though motor cars are used less during the winter.

It behooves us, therefore, to be especially careful during November, December, January and February.

More boys and girls were killed last year by automobiles than died of diphtheria, scarlet fever, or typhoid.

Whisky has by volume 44 to 55 per cent of absolute alcohol and according to the United States Pharmacopeia should not be consumed under four years after distillation. Beer (common brands) has by volume 4½ per cent absolute alcohol. Sweet wines have from 10 to 22 per cent by volume absolute alcohol. Whisky, being the favorite of all drinks, is imbibed more freely than others. What quantity taken will produce symptoms of intoxication? My opinion from experience and observation is that one ounce of whisky will have an intoxicating effect taken by any adult not accustomed to its use. 2, 3, 4 ounces become proportionally intoxicating. Since beer has 4½ per cent of alcohol by volume, one 12 oz. bottle has 1.08 oz. whisky equivalent. One bottle has certain intoxicating effects. 2, 3, 4 are proportionately more intoxicating. The small percentage of alcohol in beer by volume makes for slower absorption and explains why you see so few intoxicated from drinking beer.

I am not discussing pathology or treatment in this paper. I see only one course to pursue as physicians. . . . Teaching and practicing abstinence from all alcoholics.

Some Cytologic Changes In Allergy*

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The present interest and increasing knowledge of allergy and its treatment have depended very largely upon a study of the trigger mechanism which excites a variety of reactions in different subjects. The particular kind of reaction which results depends in part upon the chemical nature of the exciting substance—the allergen—but it depends also upon conditions in the host.

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*Read before the Clarksdale and Six Counties Medical Society March 25, 1936.

Allergy is at least one striking condition in which a study of the individual who suffers from the disease, is more important than the study of the agent which causes that disease. In fact, allergy as a whole depends upon changes in the host, which we speak of as sensitization, and, which are determined by the nature of the previous contact with the specific substance. To say that a reaction is allergic is to imply that the individual, who manifests that reaction, has had previous contact with the specific substance. As we arrive at a better understanding of biochemistry, particularly as it pertains to that mysterious phenomenon we call allergy, we become more and more impressed with the essential influence which is exerted by the various antigenic substances on the designated shock tissues of the body, and at the same time a very definite change in many of the blood elements of the body.

EOSINOPHILIC RESPONSE

Practically all of the important diseases are accompanied by some particular blood changes which have definite diagnositic significance. It is a generally known fact, that, in the various shock organs or tissues in which the lesion of allergy occurs, the pathologic picture is characterized by edema and eosinophilic infiltration. In the nasal, paranasal sinuses, bronchial, conjunctival, intestinal, and genitourinary tissues the eosinophiles migrate through the epithelium and may be found in the secretions. The demonstration of these cells in the secretions, therefore, may be utilized as a means of corroborating the diagnosis of allergy.

The earliest recorded description of eosinophiles was made by Warthin Jones(1) 1846. A few years after Leyden had demonstrated the Charcot-Leyden crystals from the bronchial secretion from asthmatics, Ehrlich(2) described the leucocytic cells with acidophil granules and named them eosinophiles. Later investigators called attention to the possible relationship of these crystals to the granules of eosinophile cells. This observation was confirmed by several authors, who emphasized the findings of eosinophilic infiltration and edema in the tissues, and the demonstration of eosinophiles in bronchial secretion from asthmatics, hay fever and vasomotor rhinitis suffers. Following the period of these earliest observations, these important and significant pathological findings in the nose and paranasal sinuses either were not recorded or received no more than passing mention, even in cases of frank allergy, until only a few years ago.

During the twenty-five year period between 1895-1920, there was much controversy and many divergent opinions expressed regarding the origin, pathology, and significance of nasal polypi. The most popular opinion, however, was the belief that they were of an infectious origin.

The classification of the inflammatory diseases of the paranasal sinuses which have been recognized since the beginning of rhinology as a specialty, divide the various affections into three main classes; (1) the suppurative; (2) the nonsuppurative, or hyperplastic; and (3) the combined suppurative-hyperplastic diseases. This classification, however, does not recognize or distinguish the hyperplastic or polypoid diseases of allergic orgin, but, it is apparent that they have been included in the nonsuppurative and combined suppurative-hyperplastic groups.

During the past few years, the reports on the pathologic significance of edema and eosinophilic infiltration of the nasal and paranasal sinus tissue have shown that allergy plays an important part in the diagnosis and treatment of the diseases of the nose and throat. The reports of Eyerman(3), Hansel(4), Kahn and Stout(5), on the significance of eosinophiles in the nasal secretions, have emphasized the importance of considering the cytology as an aid in the diagnosis of allergy.

By a comprehensive correlation of the clinical picture with the histopathologic examination of the tissues, there should be no difficulty in establishing a definite diagnosis of paranasal sinus disease. It is not always practical, however, to perform a biopsy of the tissues, but the cytology of the nasal and sinus secretions may be considered an approximate index of the pathologic process occurring in the tissues. The cytologic findings, therefore, give important diagnostic information.

The collection of secretion from the nose for smear examination is easily and readily obtained by having the patient blow the nose on a wax paper or cellophane handkerchief. This gives a specimen which represents only nasal secretion or a collection of both nasal and sinus secretion. Thin watery material may show eosinophiles after many examinations. This histopathologic examination of the mucous membranes shows the maximum infiltration of the eosinophiles just beneath the basement membranes. From here, they migrate through the basement membrane and the epithelium to the surface, where they are uniformly distributed. The staining technique used for preparing the smear for examination is the same as that used for blood smears; by drying or the application of methyl alcohol.

LEUCOCYTIC RESPONSE OR LEUCOPENIC INDEX

In 1920 Widal and Abrami(6) proposed a new test for liver function which they designated the hemoclastic crisis. The procedure consisted, briefly, of the administration of 200 cc. of milk in the fasting subject. A positive reaction, indicative of hepatic dysfunction, consisted in a falling curve of the total leucocyte count, falling blood pressure, and prolonged clotting time. Their studies indicated that the reaction could be correctly interpreted by following the white cell count alone. A consequent digestive leucocytosis was regarded as negative, while a leucopenia was interpreted as evidence of deranged liver function.

In attempting to apply this test for heptic function, Vaughn(7), along with many others, concluded that it was not reliable, but did observe that a number of patients giving positive colloidoclastic reactions were allergic to milk. This suggested the possibility that the ingestion of any food, for which a person has an idiosyncrasy, might be followed by a leucopenic response.

The earlier observers' theoretical explanation was that, with the liver functionally damaged and unable to control adequately the passage of absorbed materials, such as, milk protein or partially digested milk protein, from the portal system into the general circulation, all of which passes through the liver, thereby, producing in a mild degree the manifestations of protein shock. As is well known, anaphylactic shock is accompanied by leucopenia. When this test was proposed, it was given a thorough trial, and the conclusions of the majority was that it was not a reliable test for liver function. Vaughn(7) saw many cases where milk caused a fall in the total white cell count, most of which were definitely allergic to milk. It occurred to him at that time, if a leucopenic response follows the ingestion of milk by one allergic thereto, and, if this represents an allergic response rather than one due to hepatic insufficiency, as has been maintained by Widal and Abrami(6), it is possible that a similar response will be followed by ingestion of other foods to which one is allergic. In this case, a test method might be developed to supplement cutaneous tests in the diagnosis of food allergy.

Assuming that the allergic reaction to ingested foods consists of a leucocytic fall, Vaughn(7) found, on parallel studies of the leucopenic response and the positive skin reaction, that the two agreed in 62 per cent of the tests. Briefly, the positive or negative leucopenic response was found to correspond with actual evidence of idiosyncrasy on food trial in 70 per cent of cases.

The technique of the study was as follows: the patient reported to the office, fasting, and two white counts were made at ten minute intervals. The patient then ate the food to be tested, after which serial white counts were performed at half hour intervals for four hours. The same pipette and counting chamber were used throughout each test. During the period of study, the patient sat around the office with no particular change of posture, other than that of walking a few steps to the laboratory for each blood test.

GRANULOCYTOPENIA

Squier and Madison(8) reported evidence to show that the taking of drugs containing amidopyrine played an important role in the etiology of some cases of acute primary granulocytopenia. In a series of fourteen cases, the onset was directly preceded by the use of amidopyrine alone or in combination with barbiturate. The mortality in a group of six of those patients, who continued the use of drugs containing amidopyrine, was 100 per cent, while in a group of eight patients, who did not continue the use of these drugs, only two died, and both of these died in the initial attack.

It has been definitely proven that leucopenia is frequently present in allergic reactions to serum disease, and food idiosyncrasies; also present in persons who have developed specific allergic drug hypersensitivity. The increasing depression of the granulocytes, and finally, profound leucopenia, makes possible bacterial invasion of tissue and the development of lesions of the mucous membranes to complete the clinical picture of acute primary granulocytopenia.

SEDIMENTATION RATE OF INCREASE SUSPENSION STABILITY OF THE ERYTHROCYTES

A rapid sedimentation rate is generally accepted as indicating a destructive process in the body.

Cutler(9) makes the following classification of disease in which the rate of sedimentation is increased: (1) Chronic infectious diseases, such as tuberculosis and syphilis; (2) Malignancy; (3) localized supparatives, such as pelvic inflammatory diseases, mastoiditis, sinusitis, empyemia of gallbladder and bronchiectasis; (4) acute infectious diseases, such as pneumonia, septicemia and endocarditis. Among the conditions in which the sedimentation rates were unaltered, Cutler lists the allergic diseases, asthma and hay fever.

Schulhof(10) concluded from his work that a very slow sedimentation rate of the erythrocytes is a constant symptom in allergic individuals, unless they show evidence of a complication, especially infectious, which tends to accelerate the sedimentation; therefore, the sedimentation rate should be a valuable aid in reaching a working diagnosis in some of the more obscure manifestations of allergy. It would, for example, help to distinguish the patient suffering from perennial allergic rhinitis simulating sinusitis with chronic sinus infections. In this connection the sedimentation rate should be distinctly of value, since the X-ray frequently fails to differentiate the two conditions. The sinus often appears cloudy in the allergic as well as in the infectious types.

CONCLUSIONS

1. The demonstration of eosinophiles in the secretions from the nose and paranasal sinuses is good presumptive evidence of the existence of allergy.

2. By repeated observations on the cytology of the secretions, acute and chronic infections can be differentiated.

3. A method of determining leucopenic index is presented which appears to have a reliability equal to that of the familiar cutaneous sensitization test for foods and which could, in case of necessity, be used instead of the latter with equal reliability.

4. Since it is much more difficult than the skin test method, its chief usefulness is an adjunct to the latter, especially for use with foods concerning which there is still some question of skin reactions and those which experience has shown tend to give false negative reactions.

5. When used primarily with just the staple foods, such as wheat, milk, and eggs, it will increase our diagnostic accuracy by at least 5 per cent.

6. On the bases of the above evidence, it is believed that acute primary granulocytopenia can be caused by repeated administration of amidopyrine to persons who have developed allergic or anaphylactoid hypersensitivity to that drug.

7. The data presented in the study of the increased suspension stability of the erythrocytes, seem to support the idea that patients with uncomplicated allergic diseases are all slower than the theoretical mean of the range, 2 mm. to 12 mm. in one hour which is generally accepted for normal.

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What the General Practitioner Should Know About Indications For Surgery In Tuberculosis

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The various types of operation which have been devised for the treatment of tuberculosis are proof positive that none of them reach the desired ideal in the treatment of this disease. Each operation has its special indications, contraindications, and time of execution. Therefore, it will not be possible to discuss each operation with its individual indications; only the most important procedures will be given consideration.

First, let it be said, that surgery in this disease, probably as in no other, necessitates complete clinical understanding of the handling of patients from a non-operative standpoint. Only by so doing can one appreciate the **need** and **indications** and **time** of indication for the operative procedures. Archibald said the surgeon must think fundamentally, mechanically, and in terms of resistance.

THE RATIONALE OF SURGERY

Although the general incidence for the need of surgery is very low, one should not take the point of view that it is playing a minor role in the treatment of these individuals. Far from it. Collapse measures are based on logical deductions and not mere theory.

By surgery one means collapse and drainage —the putting to **rest** of a lung, which in turn, brings about a diminution in oxygen, increase in carbon dioxide, and an increase in lymph stasis. The arterial supply to the lung is not appreciably affected as is the pulmonic oxygenation side of the circulation. Consequently, the result is one of **fibrosis** which is the natural healing process in this disease.

When large cavities are continuous, draining and harboring a mixed type of infection, acting as a constant source of spreading the disease, it is only logical that drainage should be instituted. Surgery attempts to do this.

For the sake of completeness a brief classification of thoracic operations will be given:

- I. Intrapleural
  - 1. Not on the lung
    - (a) Pneumothorax
    - (b) Oleothorax
    - (c) Intrapleural pneumolysis
  - 2. On the lung
    - (a) Pneumectomy—lobectomy
    - (b) Direct drainage of the cavities as in abscess.
- II. Extrapleural
  - 1. Phreniectomy
  - 2. Thorocoplastics
    - (a) Complete
    - (b) Partial
  - 3. Various types of pneumolysis—i.e. Apicolysis.

Realizing that **pneumothorax** is the most frequent procedure to follow after non-operative treatment has failed, I will herewith consider its outstanding indications. Pneumothorax is indicated in clinically unilateral disease with or without cavities, provided thorough trial has been given conservative treatment. This can be ascertained by repeated physical examination, X-ray findings, and sedimentation rates. A small cavity in the opposite lung does not always contraindicate the use of pneumothorax, and as a matter of fact, truly unilateral disease is much less frequent than is generally supposed.

It may be used in either fibroid or exudative type of phthisis, but is usually more preferable in the former. In cases of hemoptysis it is occasionally indicated especially if spreading of the pneumonitis takes place after hemorrhaging.

The compression type of pneumothorax is less frequently used than formerly but occasionally gives remarkable results.

The results with this simple and often ambulatory method of treatment are so favorable that as a general rule it should be the first thought when rest in bed fails. Its field of usefulness is broader than for other procedures, requiring less skill, less inquiry to the patient and when properly administered is practically without danger. I have repeatedly seen pneumothorax given on one side when there was also a contralateral lesion on the other, to find that later improvement has taken place in the contralateral lung as well as the side on which the air was administered. This probably is due to auto-tuberculinization taking place at a minimal rate which helps build up immunity to the disease.

The principle causes of failure of pneumothorax are: (1) Failure to collapse apical cavities. (2) Failure to collapse stiff-walled cavities which have been long-standing. (3) Failure to bring about the desired collapse because of intra-pleural adhesions. Of course, failures do sometimes arise because of subsequent infection, but these are of less frequency.

It is for these reasons that intra-pleural pneumolysis, thorocoplasties, and oleothorax sometimes become necessary. If infection intervenes, the instillation of gomenized (5%) oil is recommended, but I have personally used it in only one case and this was a failure.

PHRENICECTOMY

Of the extra-pleural operations phrenicectomy is certainly the most frequently used and rightly so. It is indicated frequently in unilateral cases in which pneumothorax fails to meet the requirements. It is particularily adapted to lesions at the base of the lung. The pump-like action of the hemi-diaphragm is discontinued and rest allowed the lung. Using it in conjunction with, or due to the failure of pneumothorax, it works equally well and for the same reasons may be used in hemoptysis if the blood has its origin at the base of the lung. Coughing is less, easier, and expectoration decreases following phrenicectomy.

In cases of bilateral tuberculosis phrenemphraxis should be used rather than evulsion of the nerve since permanent paralysis is not desirable on both sides. In chosen cases the result is frequently augmented by giving oxiperitoneum to help push the diaphragm leaves up even higher.

In cases in which it is impossible to produce pneumothorax due to adhesions of the pleural surfaces, the operation is indicated. Like pneumothorax, the unilateral, progressive, and exudative type, where conservative treatment is doing no good and where it is impossible to collapse the lung by other reasonable methods, phrenicectomy should be tried. Naturally, it collapses soft, freshly formed cavities better than stiff-walled ones.

In "early" unilateral cases it may shorten a prolonged rest regime and other indications may arise in cases where the surgeon's judgment would merit its indication.

Ray Matson has called our attention to the notorious anatomy of this nerve, but with carefully executed technique the usual case gives little to worry about. I have seen several cases, however, in patients of a hypochondriac type which, due the fact that the operation was a left-sided one, seemed to cause considerable disturbance of heart function and indigestion. This is due to the pushing up of the heart and allowing the stomach to rise to a high level, and may cause the patient continuous misery and discomfort which cannot be remedied. Therefore, the operation is preferable in right-sided lesions.

THOROCOPLASTY

Finally, there occurs a type of patient in whom conservative treatment followed by a long regime of pneumothorax or a phrenicectomy, who has not responded and still shows activity as determined by X-ray, physical examinations, temperature and pulse chart, and sedimentation time.

Thorocoplasty gives good results in long-standing cases of tuberculosis with multiple cavities. Or in cases that have at one time had pneumomothorax and re-activation taking place readministration of artificial air is impossible.

Thorocoplasty is now done in three stages depending upon how much collapse is necessary in each individual. The principle of Sauerbruck is still adhered to, but the mortality and extensiveness of the operation have been greatly reduced. The operation is not indicated in active or acute cases.

The operation, one or two stages, is frequently done on one side where the nature of the disease is fibroid in type with stiff-walled cavities. Here, in the apices of the lungs, pneumothorax, phrenicectomy, etc., are liable not to accomplish the desired collapse. A one or two stage thorocoplasty is frequently the procedure of choice, but should not be done until activity is at a minimum.

Bronchoscopic aspiration of infected cavities, the use of intra-tracheal anesthesia, and the hyperventilation of the lungs immediately following the operation, all have made the dreaded complications of pneumonia, atelectasis, and asphixia less apt to occur. Thus the physician can offer a better prognosis to these patients whom he deems fit for this procedure.

SUMMARY

Thorough understanding and appreciation of the value of conservative treatment cannot be over-estimated. Even after surgery is found necessary the medical treatment has, by no means, ended. Frequent physical examinations, repeated X-rays, and sedimentation rates should be done following operations just as they should have been done before. One should not conclude that surgery is **extensively** or even **frequently** indicated in tuberculosis. Probably it would rarely be indicated if patients came for treatment when the disease was just beginning. The incidence for surgery depends to a large extent upon the surgeon. Several indications for surgery have been enumerated.

It goes without saying that the general operative risk is to be considered and waiting **too late** will not give credit to surgery where it is due.

The Changes In the Eye Grounds In Systemic Diseases*

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Many systemic diseases cause changes in the eye grounds. It is my purpose to discuss only those diseases most commonly met by the general practitioner.

The changes in the eye grounds most commonly seen by us are in the retina, the choroid and at the head of the optic nerve. These changes are best seen with the ophthalmoscope.

A true choroiditis is distinguished from a true retinitis by the following means: In choroiditis the exudative spots are blurred on account of being veiled by the retina, whereas in retinitis the exudative spots are plainer for the opposite reason. Too, in choroiditis the retinal vessels can be seen in front of the diseased spots while in retinitis the vessels lose their identity in the area of the diseased spots.

The most common diseases causing changes in the eye grounds are: syphilis, albuminuria, diabetes, leukemia, gout and diseases of the vascular system—notably arteriosclerosis.

In looking into an eye one sees the retina lying in front of but directly upon the choroid. So, when one sees a spot of retinitis, there is a corresponding spot of choroiditis and vice versa.

In albuminuric retinitis one sees this picture. There is a general haziness of the retina and head of the optic nerve, distention of the retinal vessels, striate hemorrhages and white patches in the fundus. **The white spots** are found surrounding the papilla and the yellow spot. Those white spots about the papilla are rather large and solid, while those about the yellow spot are small white stipplings radially disposed giving a crown-like picture with the yellow spot the center of the crown.

In diabetes one sees small sharply defined white spots about the yellow spot and its immediate vicinity, but the white spots are not stellate in arrangement as are those in albuminuric retinitis. Between the white spots one may see small dots of extravasated blood. The rest of the retina is clear and the papilla shows no change in its appearance.

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*Read at meeting of Delta Medical Society, Oct. 9, 1935, Moorhead, Miss.

In syphilis one usually finds a diffuse retinitis, characterized by a general haziness of the retina with a faintly grayish appearance, and about the yellow spot densely gray spots. It is usual to have an associated iritis and choroiditis. Later, as the haziness of the retina disappears, the gray spots become more sharply defined, indicating atrophy. Also these spots may become almost black due to the deposit of black pigment. In the earlier stages one may see small hemorrhagic areas along the retinal vessels. These hemorrhagic areas become white as atrophy sets in. The optic nerve is frequently involved and is a very common cause of blindness in this section. The usual picture here is to see the temporal side of the nerves (it is usually bilateral) becoming paler than normal until finally the nerve becomes a shiny, bluish-white when atrophy is complete.

In arteriosclerosis one sees in the beginning the following: The arteries appear smaller and of a glistening appearance and the terminal arteries resemble a corkscrew on account of their becoming tortuous. Later, one may see multiple small hemorrhages along the course of the vessels. Finally, one may encounter a thrombosis of the central vein, giving the picture of vastly engorged veins, while the arteries are smaller than usual. In this condition it is usual to find many hemorrhagic spots throughout the retina caused by the engorgement of the veins.

In thrombosis of the central artery the retina is paler than normal, the arteries are smaller due to being poorly filled, while the veins are about average size. If one makes a later examination as the retina dies the retina has an opaque, milky-white appearance, most markedly in the vicinity of the papilla and favus centralis. The lavus centralis itself appears as a vivid red spot.

Gout may manifest itself in the eye grounds as a papillitis or a hemorrhagic retinitis. In papillitis the head of the optic nerve is obliterated by the exudate, the veins are engorged, the arteries are contracted and small hemorrhages may be seen near the head of the nerve.

In hemorrhagic retinitis, where gout is the etiologic factor, one sees a few or many small retinal hemorrhages due to degeneration of the vessel walls.

Tuberculosis Booklets

The following booklets on tuberculosis are distributed free to physicians on receipt of post card request by Mississippi Tuberculosis Association, Sanatorium, Miss.

CHILDHOOD TYPE OF TUBERCULOSIS. Diagnosis and treatment. Illustrated with X-ray plates and color plate showing tuberculin reaction.

DIAGNOSTIC STANDARDS FOR TUBERCULOSIS OF THE LUNGS. Standards for guiding diagnosis and classification of pulmonary tuberculosis.

THE TUBERCULIN TEST. Leaflet telling briefly what the tuberculin test is and what it means.

WHAT YOU SHOULD KNOW ABOUT TUBERCULOSIS. Designed for the layman to dispel unnecessary fears and to give correct information about the nature, treatment and prevention of tuberculosis.

WHY DOES IT RUN IN THE FAMILY? Brief analysis of the social problems of tuberculosis.

You will find the above very helpful. It is a fine piece of education our sanatorium is doing. The Superintendent of the Sanatorium is doing a great work. He has great vision. He operates one of the best ordered hospitals of its kind in the world. There is much work yet to be done in eradicating tuberculosis. Improvements will no doubt come as time goes on; but we deeply appreciate the vision and the ability of our superintendent and the work of our great institution.—Ed.

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MISSISSIPPI STATE MEDICAL ASSOCIATION and COMPONENT SOCIETIES

Some Accomplishments Of Organized Medicine In Mississippi*

J. R. HILL, M.D.
Corinth, Miss.

Mr. Chairman, Members of the Mississippi State Medical Association, Ladies and Gentlemen:

After an absence of twenty years the Mississippi State Medical Association has returned to the beautiful city of Greenville, the Queen City of the Delta. During this period we find, like many other cities of our state, that she has grown and developed by making many substantial improvements. An increase in population of 7,000 is noted, and instead of muddy streets and poor lighting we find paved streets and beautiful white-way lighting, with many magnificent buildings interspersed throughout the city. The King's Daughters Hospital, one of the largest and best in the state, and one that any state might well be proud to have within her borders; the city hall, postoffice, Y. M. C. A., public library, theatre, office buildings, medical clinics, drug stores, bus stations, and improvements on all city schools; natural gas has been piped into the city; an airport established which is now essential, and was not possibly thought of twenty years ago; city and county enjoying the benefits of public health service, not only for the school children but for those of pre-school age as well. After mentioning all these splendid accomplishments there is one of the most commendable things to be mentioned yet; namely, we find that the good people of Greenville still have that gracious Southern hospitality that has characterized them through all these years, and the Association appreciates so much. The Mississippi State Medical Association wishes to extend congratulations to the City of Greenville for having made this wonderful progress, and hopes that you may continue to grow and expand until you have covered this great delta country with beneficent achievements like the high waters cover your lowlands.

My purpose at this time is to call your attention to some of the accomplishments of organized medicine in Mississippi. A glance at the territory more than a hundred years ago when it became a state brings to view a vast area of partially developed territory with a population of 75,000; a wonderful variety of soils, and forests of valuable timber. Our fertile land and timber attracted planters and lumbermen who began to make settlements and develop our state. The great stretch of lowland on the west and south studded with bayous and boies of shallow water contaminated with decaying vegetation proved to be a veritable hotbed for proliferation of bacteria and a paradise for carriers. Malaria and typhoid fever preyed upon the populace heavily and frequent outbreaks of yellow fever and smallpox destroyed lives by the hundreds and even thousands. There being no vital statistics service to determine the mortality rate per thousand we will never know the terrible destruction of these now known preventable diseases. So little was known about the cause and prevention of these diseases at that time it is little wonder that so many desirable emigrants moved on to more healthful places retarding the development of Mississippi. Why should they settle here when we have ample reason to believe the mortality rate was appalling?

The first Public Health Department was established in Natchez in 1818, the year following our admission into the Union as a state, but it is pathetic to know just how little was known about public health work at that time. Vaccination for smallpox and quarantine constituted the preventive measures. Almost startling is the revelation of the great stretch of years through which the population of Mississippi passed with little knowledge of health measures and almost no pretense toward the control of hazards. Citizens of the present day living under the constant care of a governmental plan that has won national renown finds the comparison almost beyond belief, but reviewing the history through the years does disclose far visioned men who summoned the almost insuperable in order to lay the foundation of the present health system.

Evidently the Civil War cast a damper over the health legislation for many years just as it retarded every other phase of development in Mississippi. From 1857 to 1878 no new law on sanitation seems to have been enacted, but in the State Medical Association which was organized in 1867 a ferment was brewing for health laws and a State Board of Health which was soon to be productive of marked advances in the struggle against infectious and contagious diseases.

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*President's Address, presented at the Sixty-Ninth Annual Session of the Mississippi State Medical Association, Greenville, May 5, 1936.

In 1877, through the influence and effort of the Mississippi State Medical Association the State Board of Health was created, a great forward step that has penetrated every nook and corner of the state with its humanitarian benefits. The history of public health in Mississippi like the history of the world may be appropriately divided into ancient, medieval and modern. The ancient period began with the formation of the Mississippi territory in 1798 and extended to the creation of the Mississippi State Board of Health in 1877. The medieval history of health work in the state might be said to extend from the formation of the State Board of Health to the year 1910 when real accomplishments began to be manifest; and modern history dates from this particular time. Fortunately for all living in what we consider a healthy era it is hard to realize the time and effort required to reach the present efficiency of this service. It is not a small task to sway the public and build it to a consciousness of the need of public health measures, since the masses are ignorant as to the value and the necessity of these measures and superstitious as to the motives of the health workers. Much time is required in educating them to a willingness and cooperative understanding of the varied present program connected with efficient health service.

Four members of the first State Board of Health lost their lives in an epidemic of yellow fever. In reviewing the history of our nation we learn that when men have distinguished themselves by acts of bravery or by having rendered some great service to the country, either as statesmen or in military life, their names and deeds have been immortalized and in many instances great shafts of stone erected perpetuating their names and memory. These pioneer workers in public health service lost their lives in line of duty fighting for the welfare of their people. Going down as they did they might be styled martyrs of medical service. I cannot erect monuments to their memories but I wish to raise my voice in honor and praise to their illustrious names. The year 1910 ushered in the modern history period of public health work in Mississippi. Dr. W. S. Leathers was made Public Health Director, and there was a powerful public health awakening; increased appropriations were made; funds obtained from the Rockefeller Commission; bacteriological laboratory established; office of sanitary inspector created; Bureau of Vital Statistics established in 1912; morbidity reporting; office of state factory inspector created; intensive anti-typhoid campaigning; tuberculosis sanatorium established in 1916; child hygiene and public health nursing; state sanitary engineer; full time county health work in 1920; malarial eradication demonstrations; laws for the prevention of blindness in the new born; service that has reached every class in every part of the state.

In every great reform noted in history there has been a leader. The question naturally arises as to whom the credit is due for the rapid strides recorded in public health work in the state during the period mentioned in the preceding paragraph. There is hardly a physician or intelligent layman in Mississippi who would gainsay the assertion that Dr. W. S. Leathers was the guiding genius who brought the health work of the state from obscurity to the point that it attracted not only national attention but also the notice of many foreign countries as well. For fourteen years his name was synonymous with public health advancement in Mississippi. For seven years he held the position of Director of Public Health and for seven years he was secretary and executive officer of the State Board of Health.

In 1924, against the protest of all members of the Board, Dr. Leathers tendered his resignation. Since the executive officer of the State Board of Health has been for many years a potent factor in shaping the policies and success of the Board, it is well at this point to record the selection of Dr. Felix J. Underwood as secretary and executive officer of the Board. Many of us thought that the state had sustained an irreparable loss in the resignation of Dr. Leathers, but the choice of Dr. Underwood for this important post has proven to be a fortunate selection. The progress of the Board has been greatly broadened and strengthened under his direction. Having come up from the ranks his thorough acquaintance with the various peculiarities of the people of the state makes it easy for him to approach any class of citizens with ease and success in his endeavors to better the health conditions of our citizenship.

Many events could be mentioned in connection with this service but my purpose is only to give a glimpse of a science that has been evolved from the Dark Ages and is now reaching a stage of more or less exactness. The population of the state has increased 12½ per cent during the last ten years, and during this time typhoid cases have dropped from 2644 to 1315, and deaths from 342 to 197; smallpox cases have dropped from 3148 to 37, and deaths from 44 to 0; diptheria cases have dropped from 2225 to 1785, and deaths from 282 to 162; malaria cases from 118,376 to 91,045 and deaths from 722 to 355; tuberculosis cases have dropped from 4180 to 3640, and deaths from 2271 to 1649. The State Board of Health, which is the first born man-child of the Mississippi State Medical Association, through its numerous programs has been of inestimable value to the commonwealth of Mississippi as shown by actual statistical reports. The wonderful service was not created over night but it is the result of years of patient and persistent work and the expenditure of large sums of money, and an attempt to disrupt or hinder in any way the activities of such a beneficent agency should be dealt with as treason, and no patriotic and philanthropic citizen will be found guilty.

We are indebted to other agencies for financial assistance and cooperation which has meant a great deal in the building up of a board and useful program that has attracted so much favorable consideration. The United State Public Health Service and International Division of the Rockefeller Foundation have both been especially considerate of Mississippi's Health Department and they have rendered great service to the people through the Board of Health by their liberal appropriations and cooperation during the past twenty years. Other agencies that have greatly assisted us in launching health programs that have helped to lower mortality in the State are: The American Red Cross, the United States Children's Bureau, the Census Bureau of the Rosenwald Fund, and smaller organizations as well as individual gifts from a private citizen of the state for maternity hygiene. Last but not least, in 1930, the Board of Directors of the Commonwealth Fund of New York City chose Mississippi as the third state in the Union for a cooperative program which has already meant a great deal to public health work in the state. Since 1931, through a cooperative program between the Commonwealth Fund and the State Board of Health twenty-four four-year scholarships have been awarded throughout the state, and eighty-nine fellowships, that will prove of inestimable value to the public health work thru the years to come. Another program through the cooperation of the Mississippi State Medical Association, Commonwealth Fund, and Tulane University has been of great value to the physicians of the state in putting on a postgraduate course in obstetrics covering the entire state. Some of us older practitioners had drifted into rut practices that were in some instances hazardous to both mother and child, and this most excellent course brought to our doors the last word in science and most practical technique of this branch of medicine which will doubtless show a marked reduction in infant mortality rate in our state in the future. We are deeply indebted to Drs. Lapham and McCord, our very able instructors, for their very practical and efficient work.

After reviewing the medical problems of Mississippi since I began the preparation of this paper I have reached the conclusion that we should make preventive medicine our watchword, and as long as the mortality rates from malaria, tuberculosis, typhoid fever, diphtheria, and pellagra show such inroads on our populace we should be up and doing until these preventable diseases are controlled.

During this year the Woman's Auxiliary under the leadership of Mrs. Leon S. Lippincott has been active and made much progress in strengthening the organization and putting on programs along educational and preventive lines that are worth while. It has also contributed to the social phases of this meeting in such a manner as to add greatly to the pleasure and dignity of the occasion.

In approaching the close of this administration I should feel that I was an ingrate if I did not mention the many kindnesses received during the year, and I wish especially to thank the officers of the Association and the chairmen of the different sections for their splendid cooperation in preparing our program, and more than all I wish to thank the Association for the very great honor of being your president.

The Progress Made In Hospitalization In Mississippi For The Year 1935-36*

H. A. GAMBLE, M.D.
Greenville, Miss.

During the past year there have been three main problems confronting the private and semi-private hospitals. First the care of the indigent sick; second, the maintainance of higher standards and third, the working out of a plan of hospital insurance applicable to rural conditions.

It is felt that your Association has made definite headway in making provision for the care of the indigent sick when in conjunction with the Committee from the State Medical Association its Committee was instrumental in having passed by the recent session of the legislature measures putting into effect state aid to private hospitals for the care of the needy sick. It is recognized by all that while the present plan of hospitalization did its best, handicapped as it has been by lack of funds and facilities, that the charity hospitals did not and could not afford hospitalization to the larger proportion of those, the nature of whose illnesses and the distance intervening precluded hospitalization in such institutions. A survey of the data obtainable showed that the state hospitals, while over crowded in most instances took care of only one fourth of the indigent sick of the state, and received two thirds of all funds appropriated for this purpose. It was in an effort to correct this patent injustice, to secure more equitable statewide distribution of funds. hospitalization for those most in need of it, as well as an appropriation more nearly in keeping with the exigencies of the situation, that your Association sponsored the Bill. Doubtless all of you are not familiar with it, and as it is important that everyone, physician as well as hospital owner be cognizant of its most salient features I am going to take the liberty of reading it.

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*President's Address, presented at the Seventh Annual Session of the Mississippi State Hospital Association, Greenville, May 4, 1936.

MISSISSIPPI LEGISLATURE REGULAR SESSION 1936

SENATE BILL NO. 223

(As Approved by the Governor)

AN ACT TO CREATE AND ESTABLISH A HOSPITAL COMMISSION, TO BE COMPOSED OF FIVE MEMBERS, FOR THE PURPOSE OF ALLOCATING AND DISBURSING FUNDS WHICH MAY BE APPROPRIATED FOR THE CARE, TREATMENT AND HOSPITALIZATION OF INDIGENT SICK POOR PERSONS IN THE STATE OF MISSISSIPPI, WHO ARE UNABLE, BY REASON OF THEIR POVERTY, TO PROVIDE THEMSELVES WITH SUCH CARE, TREATMENT, AND HOSPITALIZATION, TO REGULATE THE OPERATION OF HOSPITALS WHICH SHALL RECEIVE ANY SUPPORT FROM STATE APPROPRIATIONS, TO PRESCRIBE THE CONDITIONS UNDER WHICH SUCH HOSPITALS SHALL RECEIVE SUCH SUPPORT, TO DISBURSE SUCH APPROPRIATIONS TO THE RESIDENTS OF THE VARIOUS CUUNTIES, TO DESIGNATE HOSPITALS WHICH MAY RECEIVE SUCH FUNDS, TO PROVIDE FOR THE SELECTION OF LOCAL BOARDS OF TRUSTEES, AND FOR OTHER PURPOSES.

SECTION 1. Be it enacted by the legislature of the State of Mississippi, That there is hereby created a Commission to be known as the State Hospital Commission which shall be composed of five members, four of whom shall be appointed by the Governor, by and with the consent of the Senate, of the State of Mississippi, one to be appointed from each supreme court district and one from the state at large, and the Governor of the State of Mississippi shall be ex-officio, a member and the chairman of said hospital Commission.

SECTION 2. As soon as practicable after their appointment and selection said Commission shall meet and organize, and they may select a capable accountant and business person as Secretary and may select such other office assistants as may be necessary to the proper operation of the Hospital Commission, whose compensation shall be fixed by the Commission and paid out of any appropriation made for the support of indigent persons in qualified hospitals under this act; provided, however, that the total expenditures in connection with all secretarial, supervisory and managerical requirements of this act shall not in any one year exceed two per cent of the amount of any annual appropriation made under the provisions of this Act.

SECTION 3. It shall be the duty of said Hospital Commission to establish uniform charges for the care, treatment and hospitalization of charity patients in the various counties of the state. No surgeon or physician in any hospital, approved under the provision of this act, will be permitted to charge any fee for medical or surgical services rendered, in connection with treatment of charity patients, if being cared for from either state or local funds, and the only cost which shall be paid under the provisions of this act shall be for the maintenance and hospitalization of charity patients and in no instance shall the amount of such cost exceed the sum of two dollars and fifty cents ($2.50) for any one day and a day under the provisions of this act shall mean a majority fraction of twenty four hours or the total thereof; and the Commission may also allow not exceeding the sum of $7.50 for each major surgical case and not exceeding $2.50 for each minor surgical case, as operating room expense.

The Hospital Commission is hereby vested with authority to make such rules and regulations as are necessary to carry out the provisions of this Act.

SECTION 3-A. In event funds be made available to the several States by and from the United States Government or any of its agencies or departments for the purposes covered by this act, the State Hospital Commission is authorized to make and adopt such rules and regulations, and take such steps as may be necessary, in order to obtain such funds and to disburse the same in accordance with the regulations of the United States or its departments or agencies.

SECTION 4. The said Hospital Commission shall stipulate in writing the minimum requirements to constitute a standard hospital. They shall inspect or have inspected from time to time the buildings, equipment, and facilities of each hospital, which has applied in writing to be placed on the eligible or approved list, and the departments thereof, and determine the number, experience, training, and ethics of the staff or personnel in order to ascertain whether the hospital does actually meet the standard requirements. This and other important information shall be assembled and kept in a permanent written or printed form and shall determine the eligibility of all hospitals selected to provide care and hospitalization for the charity patients in Mississippi. No hospital shall be eligible to receive funds for the care and hospitalization of indigent sick that does not meet the standard requirements laid down in the rules and regulations of the Hospital Commission.

Provided, however, the State Charity Hospitals located at Jackson, Meridian, Laurel, Vicksburg and Natchez are hereby declared to be eligible hospitals under this act and shall be maintained by the State by such appropriation as the Legislature may make; and shall maintain such standards of efficiency as may be required by the Commission, provided, further, that said State Hospital Commission may designate such counties as are most accessible and available to each of said hospitals as the territory to be served by them respectively, having due regard for the location and the best interests of the persons to be treated, and the sum derived from any per capita appropriation made by the Legislature for carrying out the purposes of this act which would inure to the counties designated as the territory to be served by said hospitals respectively, shall be paid to said hospital as a part of its maintenance and support funds, and such sum shall be deducted from any appropriation made for the support thereof so as to reduce such appropriation by that amount; but in no case, however, shall any county in which there is or shall be located an eligible hospital or hospitals as herein provided be placed in the territory to be served by said State Charity Hospitals.

SECTION 5. All hospitals complying with the rules and regulations of said Commission may receive a certificate to the following effect:

"This is to certify that .... Hospital, located at ...., Mississippi, has met the requirements of the State Hospital Commission and said hospital is eligible to receive funds to care for charity patients as provided for in Senate Bill No.........., approved on the ...... day of .... 1936."

Said certificate shall be signed by all of the members of said Commission.

The Commission shall have power to revoke the certificate hereinbefore mentioned if any hospital receiving such certificate shall become inefficient or fail to maintain the standard required by the Commission, whereupon such hospital shall be stricken from the approved list and shall not be thereafter entitled to receive any State funds for the care, treatment, and hospitalization of charity patients in this state until such hospital shall again procure from the Commission a new certificate.

SECTION 6. Any hospital in this state may become eligible to care for, treat, and hospitalize indigent persons provided such hospital shall meet the requirements of and be conducted according to the rules and regulations of the Commission, provided, however, that no hospital, except the State charity hospitals hereinabove named, in this state shall be placed on the eligible or approved list unless such hospital shall first apply in writing to the Commission, asking that it be placed on such eligible or approved list.

SECTION 7. It shall be the duty of the Governor of the State of Mississippi to appoint a local Board of Trustees for a term of four years for each hospital placed on the eligible or approved list except in counties with more than one hospital, then the board so appointed shall serve all qualified institutions placed on the eligible or approved list in said county. Said Boards of Trustees shall be composed of three members, residents of the county or adjoining counties in which qualified hospital or hospitals they serve are located. The Board of Trustees shall see that the benefits of this act shall apply only to persons who have been bona fide residents of the State of Mississippi for six months next preceding their admission to said hospitals who are unable to provide for their own care, treatment, and hospitalization. Provided, however, the Board of Trustees for any county owned or municipal owned hospital shall not be appointed under the provisions of this section but said trustees shall be selected in the manner as now provided by law, and such, Board of Trustees shall be charged with the duty of complying with the provisions of this act.

SECTION 8. All persons desiring to be received into approved hospitals, under this act, shall procure from a reputable physician and two residents of good character of the County in which the applicant resides, a certificate of eligibility before being admitted to such hospitals, provided that it is practicable to procure such certificate before admission. In emergency cases where it is not practicable to secure a certificate before admission, the hospital may receive and care for such patient and later secure such certificate.

The certificate provided for may be substantially in the following form:

"We the undersigned, a legally licensed physician and two citizens of................ County hereby certify that .... a resident of .... County, Mississippi, has been a resident of this State for not less than six months and is unable to pay for proper care and treatment and hospitalization. It is our opinion that the person herein mentioned is in need of care, treatment, and hospitalization, and we recommend that said person be admitted, as a charity patient, to a regularly qualified hospital under the provisions of Senate Bill No. ...., Acts of Legislature of 1936."

SECTION 9. It shall be the duty of the Board of Trustees of each hospital placed on the eligible or approved list to make monthly reports to the Hospital Commission of the patients cared for, treated, and hospitalized and for which compensation is sought. This report shall include the names and addresses of all patients so treated and hospitalized, dates of admission and discharge of each patient, and an itemized statement of each patient's account in keeping with the fee schedule adopted by the State Hospital Commission. An eligibility certificate for each patient must be attached to this report. The Commission shall audit these reports, and when approved shall make requisition to the State Auditor for the sum so approved. Thereupon the Auditor shall issue warrants to the State Treasurer in favor of said hospitals for the sums so approved.

It shall be the duty of each hospital placed on the eligible or approved list, under the provisions of this act, to retain a copy of all reports made by the Board of Trustees to the Hospital Commission, and said reports shall be subject to inspection at any time by a resident tax payer of the State of Mississippi.

SECTION 10. It shall be the duty of the said Boards of Trustees to visit each qualified hospital on the eligible or approved list in their respective counties from time to time, not less than once each month, and to ascertain whether charity patients are being properly cared for by such hospitals. Said Boards of Trustees shall also ascertain whether any patient shall have just cause for complaint on account of treatment in such hospitals and they shall report such complaints to the State Hospital Commission, with their recommendations in respect thereto.

SECTION 11. The Board of Trustees for each hospital or hospitals are authorized to adopt such other rules and regulations as may become necessary in each community to protect patients and charity funds, and to make an equitable distribution of said funds in said counties and districts in the territories served by their respective institutions.

SECTION 12. The State Hospital Commission shall prepare and submit a detailed statement of all disbursements made by the Commission, showing the sums received by each hospital, and such reports shall be transmitted by the Governor to the next session of the legislature, and such statement shall show for each county, each hospital, and the state as a whole the amount of money expended for each month of the fiscal years covered by such statement.

SECTION 13. All sums which may be appropriated for the support of qualified hospitals under this act shall be disbursed to the various counties or territories in the proportion which the population of each county or territory bears to the total population of the State, as shown by the next preceding federal census.

SECTION 14. All sums of money that may be appropriated to carry out the provisions of this act shall be expended in accordance with the provisions of Chapter 120 of the General Laws of Mississippi, Regular Session of 1932.

SECTION 15. The term of appointive office of members of the Commission shall be four years and until their successors qualify. They shall not receive any compensation for their services except the actual traveling expenses and hotel accomodations while going to and from and attending meetings of the Commission.

SECTION 16. A majority of the members of the Commission shall constitute a quorum thereof.

SECTION 17. That the provisions of this act shall take effect and be in force from and after the first day of July, 1936.

SECTION 18. That this act shall take effect and be in force from and after its passage.

MISSISSIPPI LEGISLATURE REGULAR SESSION 1936 HOUSE BILL NO. 890

(As Approved by the Governor)

AN ACT TO APPROPRIATE MONEY FOR THE TREATMENT AND HOSPITALIZATION OF THE INDIGENT SICK IN THE STATE OF MISSISSIPPI FOR THE FISCAL YEAR BEGINNING JULY 1, 1936 AND ENDING JUNE 30, 1937, AND FOR THE FISCAL YEAR BEGINNING JULY 1, 1937, AND ENDING JUNE 30, 1938.

SECTION 1. BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MISSISSIPPI, That the following sums of money, or so much thereof as may be necessary, be and the same are hereby appropriated out of any money in the state treasury not otherwise appropriated for the treatment and hospitalization of the indigent sick in the State of Mississippi for the fiscal year beginning July 1, 1936 and ending June 30, 1937, and for the fiscal year beginning July 1, 1937 and ending June 30, 1938:

For the support of hospitals qualifying under Senate Bill No. 223 of the Laws of the Regular Session of 1936 to be disbursed to the various counties or territories in the proportion which the population of each county or territory bears to the total population of the State, as shown by the next preceding federal census $500,000.00

For the maintenance and support of the South Mississippi Charity Hospital, the Matty Hersee Hospital, the Jackson Charity Hospital, the Vicksburg Charity Hospital and the Natchez Charity Hospital, the following amounts respectively:

South Mississippi Charity Hospital	$50,000.00
Matty Hersee Hospital	50,000.00
Jackson Charity Hospitay	50,000.00
Vicksburg Charity Hospital	45,000.00
Natchez Charity Hospital	45,000.00

Provided that the sums derived from the per capita appropriation made herein which would inure to the counties designated as the territory to be served by said state charity hospitals respectively, shall be paid to said hospital as a part of its maintenance and support fund, and such sum shall be deducted from the appropriation made for the support thereof so as to reduce such appropriation by that amount.

SECTION 2. That the money herein appropriated shall be paid by the State Treasurer out of any money in the state treasury upon warrants issued by the State Auditor of Public Accounts and the said Auditor shall issue his warrants upon requisition signed by the proper person, officer or officers in the manner prescribed by Senate Bill No 223 of the Laws of the Regular Session of 1936, and that the funds herein appropriated shall be disbursed under authority and by and with the approval of the State Hospital Commission.

SECTION 3. The salary of the superintendent for each of the hereinbefore named charity hospitals shall be fixed by the State Hospital Commission and in no instance shall said salary exceed the sum of $3,600.00 for any one year.

SECTION 4. That this Act shall take effect and be in force from and after its passage.

* * *

The Bill as finally passed by the legislature differs in two important respects from the form in which it was introduced. Originally it was intended that the Hospital Commission was to have been appointed by the Governor from a group of three from each judicial district to be selected by the State Hospital Association.

This provision was early eliminated by the legislative committee, giving the governor full power of selection of the members of the Commission. The second important feature to be eliminated was one vesting in the Hospital Commission the power to fix the rates for hospitalization of the indigent sick. This the judiciary committee to which the Bill was referred proceeded to do of its own accord.

The committee representing both the State Medical Association and the State Hospital Association cannot be too highly praised for its unselfish and indefatigable efforts before the legislature.

We feel that this measure, while by no means completely solving all the problems connected with the hospitalization of the indigent sick, will stand as a milepost marking the progress of our endeavors.

Many institutions have already signified their inability to accept patients at the rate per day fixed by the bill. It was recognized at the time that few institutions could do more than break even at these rates, and the rates as finally arrived at were not in consonance with the advice of the committee.

There was a great deal of opposition to the Bill, due to both inaccurate and false propaganda, as well as ignorance to combat. While the measure proposed was not a fight per se against the state hospitals, their representatives seemed to take it as such and flooded the legislative chamber with propaganda to the effect that hospitalization costs varied from 87 cents to $1.25 per day, and that the schedule of fees proposed by the Bill was out of all proportion to costs . One had also to combat the layman's attitude as to medical costs. Some member of the legislature would take some one item in the treatment of a case and base costs upon this alone. For instance—I heard one make the statement that all it took for an appendectomy was a little ether, a knife, a few forceps and needles, and that no one need tell him that the operating room fee for such a case should be $7.50, it couldn't possibly have cost more than 50 cents. A statement such as this was born of ignorance, but has been fostered to a considerable extent by our sometimes over enthusiastic statements as to the beneficent effects to be derived from the community hospital.

Success in this new department in hospitalization, as just said, is going to depend upon the proper administration of the Act. Those who are entrusted with the carrying out of these provisions have a very serious obligation to see that no undue advantage is taken of it and that patients who are not entitled to its benefits are given treatment thereunder. The sum appropriated is totally insufficient to care for all indigent sick and it is intended that only those actually in need of hospitalization and unable to pay for it shall receive its benefits.

There is one word of warning which I feel that it is incumbent upon me to sound—and that is that there is a possibility that the state pay to privately owned institutions for the treatment of the indigent sick, may mean the entering wedge of state medicine. It behooves us to be particularly on our guard and to safeguard in every manner possible our independence of action. One of the greatest safeguards was lost when the method of appointment of the Hospital Commission was changed so that the Governor had the full appointive power without advice from the Hospital Association.

The second point about which I spoke—the maintainance of higher standards in hospitals is always with us. We believe that not only should the standards of practice in our hospitals be constantly improved, but that the standards of the hospitals in every department should show a healthy growth.

It is a far cry from the beginning of the first training school in this state for nurses, up to the present time. Yet we are convinced that our standards for the graduation of nurses is not as high as the present standards for the practice of nursing and medicine justify and demand.

We are of the opinion that a forward step would be taken were our training schools affiliated with various state institutions of learning so that prospective candidates for nursing could be given a first two years in college work leading to a graduate degree in nursing, following graduation from high school, to be completed with two years practical nursing in a hospital of recognized standards. This would make the nursing profession a group of women of higher educational standards, and better able to meet all of the exigencies of private nursing, as well as to fill, if needed, executive positions in the hospital field. Such a standard is easily within our reach. We have the training schools and we have the institutions of learning which could readily meet all of the qualifications necessary. A further advantage accruing from such an arrangement would be, that in the time intervening between graduation from high school at about 18 years of age, and that of entering training at 20 years a larger proportion of the most desirable material for nursing amongst this class of young women who have in the meantime gone into other lines of activity would be conserved to the nursing profession.

To the third point—that is the development of a plan of hospital insurance applicable to rural conditions, I have devoted a great deal of time.

A cursory survey would lead one to conclude that such a form of insurance would be easy to institute. As a matter of fact up to the present time all forms of hospital insurance have dealt with an entirely different class of conditions from that met with in the rural sections. The difference lies mainly in the fact that hospital insurance, as it has been adopted elsewhere, has been in reality, as its name signifies—group insurance, and has been limited to not only groups, but only to persons who were employed. This has the effect of spreading the risk over a much larger area and has assured the success of this type of insurance under such conditions. When one comes into the rural sections, such as we are of necessity forced to deal with, one meets with an entirely different set of conditions. First is the fact that instead of dealing with groups, one must of necessity deal with individuals. Secondly—if hospital insurance is to mean anything towards the solving of the economic strain incident to sickness, it is going to have to be made accessible to everyone. These two factors we feel are going to have a very definite influence upon the form of organization and upon the cost of this type of insurance as applied to rural districts. It is our opinion that such an organization should be financially of such stability as would make it practically impregnable.

The last legislature passed a law excellent in most respects in our opinion, but faulty only in the one respect: that the qualifications should have been higher.

Another thing—for the success of any form of hospital insurance, particularly in rural communities, it is essential that we have the whole hearted co-operation and support of the medical profession of the state. The practicing physician can insure its success or failure. Such an organization should be largely owned and controlled by the physicians of the state, particularly those who have hospital affiliations, otherwise abuses would be unavoidable, and any plan of hospital insurance would probably fail to accomplish its purpose.

I am convinced of the fact that hospitalization insurance is the ideal means of meeting the cost of hospitalization for the individual of average means, and that by active efforts and cooperation of the physicians and hospitals of the state that its success can be assured.

These three things—first the cure of the indigent sick; second—the elevation of the standards of hospitals, and third—the promotion of hospital insurance will no doubt take up a large proportion of our efforts in the future, and upon the proper handling of them will depend in large measure the success of all hospitalization.

The Electrocardiographic Diagnosis of Coronary Occlusion*

W. KENDRICK PURKS, M.D.
Vicksburg, Miss.

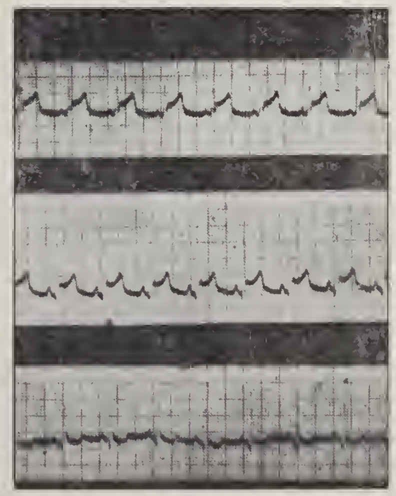
It is not the object of this presentation to offer a complete or exhaustive consideration of all the minute details and moot questions involved in the electrocardiographic diagnosis of coronary occlusion. It is intended rather to indicate and illustrate the broad, general facts about the subject and particularly to show what we may and may not rightly expect from electrocardiographic studies of the disease.

Whenever a patient presents the classical picture of severe, prolonged precordial or substernal pain, a fall in blood pressure, slight elevation of temperature, leukocytosis and a pericardial friction rub, there is no difficulty in diagnosing coronary occlusion. The majority of cases, however, do not present all of these features. In the doubtful cases, the electrocardiograph is of inestimable value in arriving at a correct diagnosis. The proper management of the situation demands on early recognition of the nature of the lesion. In doubtful cases nothing will so energize and crystallize our therapeutic attempts as the positive knowledge which an electrocardiogram may give.

Just as truly as it has been said that not all cases of coronary occlusion present typical clinical features, it may also be said that not all present typical electrocardiographic features. As there may be occlusion without pain, so may there be occlusion without electrocardiographic changes. Let us consider first the typical or usual findings in the electrocardiogram and then some of the suggestive changes and finally the more common causes of error in interpretation. I shall omit discussion of leads 4, 5 or 6, confining my comments to the three standard leads.

TYPICAL CHANGES

The typical changes are those which occur in the R-T or S-T segment. Smith(1), in 1918, showed by experimental ligation of the left branch of the coronary artery a constant change in the R-T interval. Clinical observations date back to Herrick(2) (1919) though Pardee(3) first showed in man an electrocardiogram with the same changes in the R-T segment which Smith had found in dogs. Within a few hours after an occlusion there occurs a high or low take-off of the T-wave from R. or S. The degree of deviation above or below the isoelectric line varies usually from one to three millimeters, though occasionally it may be as great as six millimeters. The deviation is best seen in leads I and III. The T-wave itself is usually upright at first. As healing occurs, the R-T or S-T deviation decreases, gradually approaching the isoelectric line. During this time the T-wave usually becomes inverted. The R-T segment preceding a negative T-wave often shows a noticeable convexity upward. This has been spoken of by Pardee as the "coronary T-wave" and by Rothschild as the "Cover-plane T." It is of great significance even if present in only one lead. Though conditions other than coronary occlusio may often simulate its electrocardiographic changes, this upward convexity preceding an inverted T is rarely seen with any of these. The changes described above as constituting typical findings may be well illustrated by a case that Elkins and I(4) reported in 1931. This patient received a stab wound of the heart which necessitated the ligation of the descending branch of his left coronary artery. (Fig. I)



(Fig. 1)

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*Read before the Section on Medicine at the Sixty-Eighth Annual Session of the Mississippi State Medical Association. Biloxi, May 14, 1935.

SUGGESTIVE CHANGES

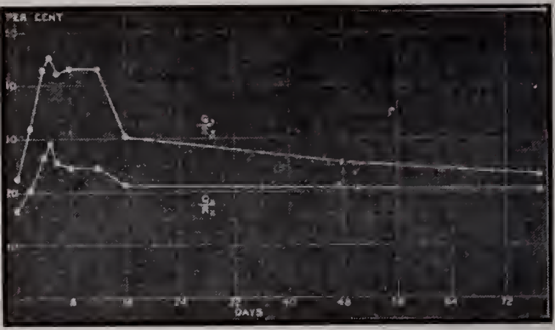
Whenever the classical electrocardiographic changes are not present it is often important to find suggestive changes. First we should mention decrease in amplitude of the deflections. Normally the QRS complex will show in one or more leads a deflection of seven millimeters or more. A decrease in amplitude below this figure in a well standardized tracing suggests marked myocardial damage such as might follow an occlusion. If a previous tracing had shown a good amplitude then a decrease is of even more significance. Widening of the Q R S, or marked splintering, also may suggest occlusion if the clinical picture is compatible with such a diagnosis. Severe precordial pain in association with bundle branch block is suggestive of occlusion involving the interventricular septum. This is well illustrated by the following case:

R. W. B., white male, age 47, had a typical attack of coronary occlusion on August 1, 1934. He was overdigitalized and three weeks later when first seen by me was in a state of collapse. He had intractable nausea, vomiting and hiccough and a very rapid pulse (160). An electrocardiogram showed paroxysmal ventricular tachycardia in one lead. Subsequent tracings all showed left bundle branch block. After a rather prolonged and stormy course the patient finally died on September 9. Postmortem examination showed an area of softening in the left ventricle near the apex and adjacent to the interventricular septum. Dissection of the heart showed a large mural thrombus and cardiac infarction at the apex of the left ventricle extending well up into the interventricular septum.

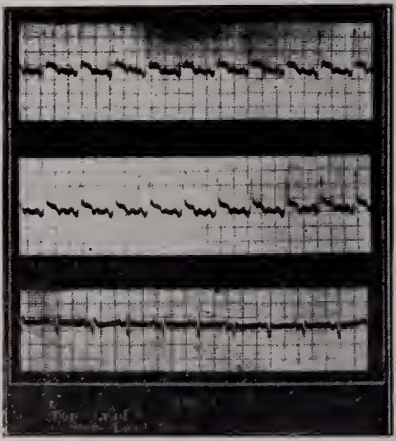
Next we come to a consideration of changes in the Q-wave in lead III. Wilson(5), in 1926 called attention to the presence of a large Q-wave in lead III in a patient having occlusion. Pardee(6) subsequently reported its frequent association with the anginal syndrome and coronary occlusion. Willius(7) and others, however, feel that it is not distinctive of coronary disease but is indicative of myocardial damage in the left ventricle. Its development following an attack of chest pain would be highly suggestive of occlusion. The patient previously referred to as having a ligation of the left coronary showed progressive changes in Q III as illustrated in the accompanying graph. (Fig. II)

COMMON CAUSES OF ERROR

Though we have outlined above some of the usual and suggestive electrocardiographic changes to be found with coronary occlusion, let us not be led astray into thinking that their presence alone warrants a diagnosis of such a lesion. Their absence likewise does not exclude it as a possible diagnosis. A number of conditions other than coronary thrombosis have been known to produce electrocardiographic changes similar to those found with such a lesion. Pardee and Porte(8) have recorded the presence of a coronary T-wave in rheumatic pericarditis. Cohn and Swift(9) have reported similar changes in rheumatic myocarditis and Levine(10) and others have mentioned R-T deviation in lobar pneumonia. Scott, Fiel and Katz(11) reported an R-T elevation in leads I and II on a patient who was found at autopsy to have 400 cubic centimeters of purulent fluid in the pericardium. I(12) reported in 1931 the occurrence of a coronary T-wave in a case of purulent pericarditis. The slide on this patient shows how relatively typical the changes may be even in the absence of an occlusion. (Fig. III) A complete autopsy on this patient showed the coronaries to be patent throughout.



(Fig. 2)



(Fig. 3)

In patients with hypertension we occasionally find some deviation of the R-T interval though no occlusion has occurred. Likewise we occasionally see changes suggestive of coronary disease following the use of digitalis. Wolferth and Wood(13) have noted the fact that electrocardiograms quite characteristic of coronary occlusion may be obtained during an attack of angina pectoris and disappear as soon as the attack is over. These changes are, of course, due to anoxemia of the heart muscle which disappears as the paroxysm subsides. Electrocardiograms of the dying heart often show R-T deviations and T-wave changes for the same reason, namely anoxemia of the heart muscle, even though stoppage of the coronaries has not occurred.

Wolferth and Wood have recently emphasized the importance of the time element in relation to electrocardiographic findings with occlusion. Tracings taken immediately after the seizure may fail to show changes which will appear a few hours later. Likewise tracings taken several days after the occlusion may show relatively normal curves whereas one within twenty-four hours of the catastrophe might have shown diagnostic features, These facts potently indicate the great value of serial tracings in questionable cases.

In summary, then, we may say that no single electrocardiographic sign can be considered absolutely pathognomonic of coronary occlusion but that certain common and suggestive findings, plus the proper clinical evaluation of the case, will lead to a correct diagnosis in the vast majority of instances. It is equally as important to avoid false positive diagnoses as it is to arrive at a correct diagnosis in the truly positive cases. The electrocardiograph is indispensible in the study and treatment of coronary disease.

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DISCUSSION

Dr. T. E. Wilson (Jackson): I listened with a great deal of interest to the doctor's very practical discussion of this comparatively recent and very important diagnostic procedure.

Until recent years the discussion of coronary thrombosis was that of an acute attack with shock resulting in death in about 50 per cent of the cases during the attack. Later the work on arteriosclerosis by Cowdry, Wearn and Gross and others have shown the process of coronary occulsion, whether it be from arteriosclerosis of the coronary vessels or from small thrombi of coronary vessels, to be a more or less natural accompaniment of the aging process in man, and many individuals go through life with coronary occlusions occuring, but disguising themselves as gastro-intestinal symptoms.

Many of these individuals have no diagnosis of heart disease at all. This is the type of case in which the electrocardiographic examination is most important.

The types developing shock along with their anginal syndromes are easy to diagnose, the one with the syndrome of acute gallbladder or gastro-intestinal upset, and this type of case now seems to be more common, is certainly a difficult diagnostic problem.

Too much dependence must not be placed on a single cardiogram made early in the course of this disease. At that time the tracing may show no departure from what is considered a normal electrocardiogram.

After a few hours, 8, 10 or 18 hours, changes commence to appear in the tracing. By taking advantage of this information, we can save many individuals from cardiac death. I am firmly convinced of that. The management of coronary thrombosis now seems to be definitely standardized. Prolonged rest in bed, certainly 8 to 10 weeks being the basis, morphine, and small doses of quinidine sulphate given routinely early in the attacks, seem to be indicated. As a rule, no other drugs are indicated.

The most important consideration is deciding as early as possible whether or not this man has coronary thrombosis. Until this can be determined with a reasonable degree of certainty, he should be treated as if he had coronary thrombosis.

Mississippi State Medical Association

ORGANIZED 1867

Leon S. Lippincott, M.D.	Editor
J W. D. Dicks, M.D.	Associate Editor
D. W. Jones, M.D.	Associate Editor

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W. H. Frizell, M.D.	Eighth District
D. J. Williams, M.D.	Ninth District

Papers and news material for publication should be received not later than the fifth of the month preceding publication. Orders for reprints must be sent in duplicate when returning galley proof.

The editors are not responsible for statements made by any contributor.

Manuscripts and all material for publication should be addressed to the editor, P. O. Box 303, Vicksburg, Mississippi.

EDITORIALS

NEW OFFICERS

A list of the officers chosen at the sixty-ninth annual session of the Mississippi State Medical Association and the thirty-third annual session of the House of Delegates at Greenville in May is published elsewhere in this number. It is our wish here to extend congratulations and best wishes to those who have assumed the important duties of guiding the Association in a time of many rapid changes in the practice of medicine.

Dr. Harvey F. Garrison of Jackson, president-elect, was installed as president. Long experience as a leader in organized medicine will prove most valuable to the Association. He has been a member of the Association since 1902, during which time he served ten years as a member of the Council and five years as its chairman. For eight year he was a member of the State Board of Health. He is the present councilor of the Southern Medical Association for Mississippi. His administration is sure to be successful.

Dr. W. L. Little of Wesson was selected as president-elect. This is a deserved honor to a loyal member of the State Association. Dr. Little has been an active practitioner of medicine and member of the Association for many years. He has served well on numerous committees including Public Policy and Legislation, Medical Education and Budget and Finance, and as a member of the State Board of Health. During the coming year Dr. Little will be in charge of organization under the direction of the president and will direct and advise with the vice-presidents in this phase of their work. The election of Dr. Little promises an increased membership and gives assurance of continued capable guidance.

Three vice-presidents were elected at the Greenville meeting, Dr. A. L. Emerson, Hernando, representing the northern division of the state; Dr. Guy C Jarratt, Vicksburg, representing the central division; and Dr. C. C. Hightower, Hattiesburg, representing the southern division. All have been active in their component societies and sections of the state. Organization under their direction should bring about definite further progress.

Dr. Leon S. Lippincott, Vicksburg, was re-elected editor and historian.

Dr. D. W. Jones, Jackson, was re-elected an associate editor and a member of the Publication Committee for two years. He is a past president, has served as a member of the Council and its secretary, and has been long a worker in the interests of the Association. His counsel and advice will continue to mean much to the publications of the Association.

As expected, Dr. J. P. Wall, Jackson, was re-elected speaker of the House of Delegates. Dr. Wall is the first and only speaker the Mississippi State Medical Association has ever had and his wide knowledge of parliamentary law and kindly way of directing difficult situations as they arise has assured his continuation in this office for as long as he can be prevailed upon to serve. His statement in acceptance that he would serve as long as the Association wanted him was sincerely welcomed. The office of speaker requires long experience and special qualifications and it is the general feeling of the members of the Association that as regards the present incumbent it should be a life position.

Dr. E. Leroy Wilkins, Clarksdale, was re-elected treasurer. He has served well for the past three years and his election was unopposed.

Dr. T. M. Dye, Clarksdale, was the choice of the Association as secretary. Because of an illness much regretted by every member Dr. Dye was unable to attend this year's meeting. The Constitution of the Association provides that no member not present at the meeting shall be elected to hold office. Accordingly Dr. J. R. Simms, University, was elected as secretary. Before the close of the meeting he presented his resignation, and the first act of the incoming president was to appoint Dr. Dye as secretary for the next three years. Dr. Dye has served as secretary since 1918, and before that time had been president, councilor, and a member of numerous committees. He is probably better qualified for the office than any member of the Association and his appointment met with general approval and the sincere wish of every member for a prompt and complete recovery of health.

Dr. W. H. Frizell, Brookhaven, and Dr. Dan J. Williams, Gulfport, because of outstanding efficiency and results obtained in office, were continued as councilors of the eighth and ninth districts respectively. Both are past presidents of the association and have served the Association long and well. Dr. Frizell has been secretary of the Council for several years, and Dr. Williams president of the Council for more years. Their advice and guidance is near indispensable. Dr. J. Gould Gardner, Columbia, was elected councilor of the seventh district. He has served on various committees of the Association, has had a large part in legislative matters, and may be depended upon to further the best interests of organized medicine at all times.

Dr. Hugh A. Gamble, Greenville, and Dr. Felix J. Underwood, Jackson, were continued as delegates to the American Medical Association, in accordance with the wise policy of returning men of wide knowledge and acquaintanceship. Both are past presidents of the Association, have held numerous offices and appointments and can well represent Mississippi's interests.

Fraternal delegates were elected as follows: Dr. G. Lamar Arrington, Meridian, to the Medical Association of the State of Alabama; Dr. R. H. Brumfield, McComb, to the Louisiana State Medical Society; Dr. I. B. Seale, Holly Springs, to the Tennessee State Medical Association; Dr. Paul G. Gamble, Greenville, to the Arkansas Medical Society. All can be depended upon to represent with honor the

State Association of **Mississippi.**

At the meeting in Greenville the officers of the past year, and especially Dr. J. R. Hill, president, were highly commended for their accomplishments during a year of changing conditions and for a most successful annual meeting. The members of the Association are confident that the new officers will keep the standards of medicine in Mississippi moving upward.

PLANS FOR THE NEW YEAR

With this number begins another new association year. Your representatives saw fit to re-elect your editor and one associate editor whose term of office expired this year. This may perhaps be taken as a vote of confidence and we are grateful. In accepting, it is fully realized that there is a definite responsibility to the Association, for the By-Laws give to the Publication Committee, made up of the editor and two associate editors, authority over all publications.

Somewhat of a new setup in our official journal, "The Mississippi Doctor," is to be used. A separate section will be set aside for the Mississippi State Medical Association. In this section it is proposed to place first scientific papers and addresses of the State Association and its component societies. Following this will be an editorial page, and then in order items of interest and general news of the State Association, news of component societies, county medical news, items from the Woman's Auxiliary to the State Association and component auxiliaries, and hospital staff transactions.

Much sympathetic help is needed. No one man or group of three men alone can make our section of the journal worth while. Every member of the Association is urged to contribute. We ask and hope for your criticisms and suggestions. Will YOU do it?

All material for publication should be sent direct to the editor of the Association and should be received by him by the fifth of each month.

GOOD NEWS

Under date of June 2, Dr. N. C. Knight, Clarksdale, writes as follows:

"Dr. Dye is getting along fine and is ready to come home in the next few days. However, he is still awfully weak. Incidentally, we was elected mayor of Clarksdale here last Tuesday by a big majority over two opponents in the first primary. We are still cheering and clapping our hands."

OUR PRESIDENT

DR. HARVEY F. GARRISON
Jackson, Miss.
President, Mississippi State Medical Association
1936-1937

President Harvey Franklin Garrison is the first Jackson physician to be given this honor since 1904. He was born near Mayesville, Georgia, July 3, 1879; six years later his father moved with his family to Mississippi. Dr. Garrison received his education in the common schools of the state and April 26, 1901 received his medical degree from the Memphis Hospital Medical College, now the University of Tennessee Medical School.

Dr. Garrison then located at Seminary, where he practiced general medicine until 1918. Having volunteered for medical service during the war, he was ordered to Clinton to take charge of medical supervision of the S. A. T. C., located at Mississippi College. After this service, Dr. Garrison began the special study of pediatrics and following postgraduate work in New York, established an office in Jackson for the practice of his specialty, and he now holds a certificate from the American Board of Pediatrics. He did postgraduate work in pediatrics in New Orleans, the New York Polyclinic, and the New York Postgraduate School.

From 1913-1921, Dr. Garrison was a member of the Council of the Mississippi State Medical Association. He was a member of the Mississippi State Board of Health, and the executive committee of the Board, for eight years following his appointment in 1916.

At the 1915 meeting of the State Association at Hattiesburg, Dr. Garrison, then councilor, introduced in the House of Delegates a motion which carried, to the effect that the president appoint a committee to draft plans for the tstablishment of a state tuberculosis hospital in Mississippi. Those appointed on the committee were Drs. H. F. Garrison, W. S. Leathers, S. W. Glass, J. J. Haralson, and D. J. Williams. The following year, Dr. Garrison was named a member of the State Board of Health and worked untiringly with that body and with the State Legislature in framing and passing the bill creating and supporting the Mississippi State Tuberculosis Sanatorium. He served on the committee to select the location, and for eight years served as secretary of the Board of Trustees of the institution.

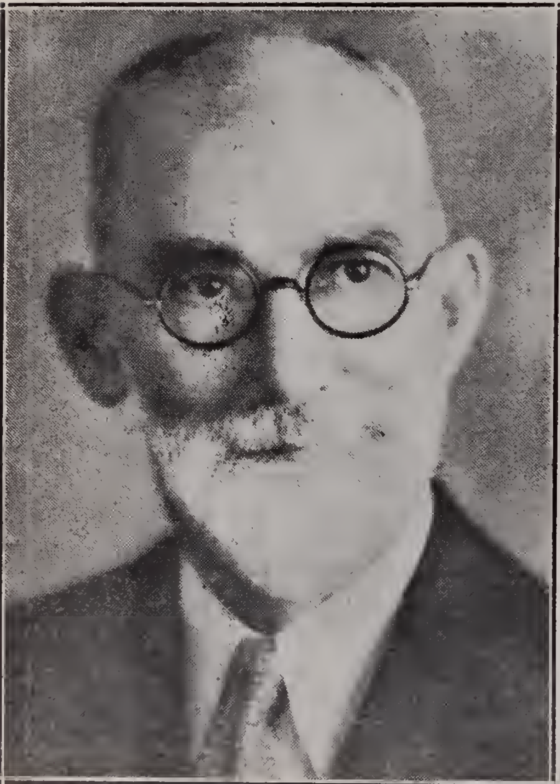
In 1913, while enroute to and from New York for postgraduate study, Dr. Garrison visited the United States Public Health Service in Washington where he became acquainted with the work and workers of that organization. On his return home, viewing the alarmingly serious pellagra situation in his and other counties, he was successful through one of our United States Senators in getting a request made to the United States Public Health Service for the detail of some man to study the matter. Dr. Joseph Goldberger was ordered to Mississippi by the Surgeon General and reported to Dr. Garrison at Seminary for a discussion of the situation and to gain first-hand information. He was taken to see all cases in Covington County. Thus Dr. Garrison was instrumental in beginning the study of pellagra in the orphanages of Jackson and later the famous experiment with the convicts at the State Penitentiary which aided much in the solution of the pellagra problem.

Dr. Garrison served on the committee which studied the problem of feeble-mindedness in Mississippi, and in making plans for the establishment for an institution in this state for those thus afflicted, he visited all of the leading institutions for the feeble-minded in the United States. For eight years after the school was established at Ellisville, he served on the Board of Trustees.

In 1933, Dr. Garrison was elected and still serves as Councilor for Mississippi to the Southern Medical Association.

Dr. Garrison throughout his life has served the best interests of the medical profession.

OUR PRESIDENT-ELECT



WILLIAM L. LITTLE, M.D.
Wesson, Miss.

Dr. William L. Little, president-elect of the Mississippi State Medical Association, was born at Rockport, Copiah County, August 27, 1868. He received his degree in medicine from Tulane University of Louisiana School of Medicine in 1889. He moved to Wesson in October of the same year and has carried on an active practice there since that time.

Dr. Little became a member of the Mississippi State Medical Association in 1890 and has missed few of its meetings. He was appointed local surgeon for the Illinois Central Railroad Company in 1895, served as a member of the State Board of Health from 1908 to 1912, and as county health officer for some fifteen years.

Dr. Little is a member of the Tri-County Medical Society, the Mississippi State Medical Association, the Southern Medical Association, the American Medical Association, and the Association of Railway Surgeons of the Illinois Central System.

He has taken an active interest in local and state civic and political affairs always.

FROM OUR PRESIDENT-ELECT

We had a wonderful meeting at Greenville but attendance should have been greater. Papers read were a credit to the essayists and chairmen of sections, all doing honor to the outgoing president, Dr. Hill, and to Dr. Garrison who did such spendid work as president-elect.

I appreciate very much the honor given to me by the Association and shall do all in my power to carry on the work in a constructive and progressive way. I shall work for a greater advancement of medical and surgical skill, a closer cooperation of our members and a better understanding and relationship with the profession of our state.

I admire Dr. Garrison, our president, and I shall do all I can towards making his term a success.

W. L. LITTLE

Wesson, May 12, 1936.

DIRECTORY AND CALENDAR OF MEDICAL SOCIETIES

Information is not complete. Secretaries of societies are urged to send in full data so that it may be known when the societies of the state meet; also the names of the officers directing their activities this year should be shown.

MISSISSIPPI STATE MEDICAL ASSOCIATION:

Seventieth Annual Session and Thirty-fourth Annual Session of the House of Delegates, Meridian, May 11, 12, and 13, 1937.

Adams County Medical Society: W. K. Stowers, Natchez, president; F. S. Dixon, Natchez, secretary. Meets third Tuesday each month. Natchez, 7:30 p. m.

Amite County Medical Society: D. H. Thornhill, Crosby, secretary.

Central Medical Society: E. L. Walker, Magee, president; L. W. Long, Jackson, secretary. Meets third Tuesday each month, Robert E. Lee Hotel Roof, Jackson, 7:00 p. m.

Claiborne County Medical Society: E. P. Jones, Hermanville, president; G. W. Acker, Port Gibson, secretary.

Clarksdale and Six Counties Medical Society: D. O. Pierce, Jonestown, president; N. C. Knight, Clarksdale, secretary. Meets fourth Wednesday of March and second Wednesday of November, Elks Club, Clarksdale, 2 p. m.

Clarke-Wayne Counties Medical Society: W. P. Gray, Waynesboro, president; Albert Hand, Shubuta, secretary.

Coahoma County Medical Society: J. A. Slack, Friars Point, president; N. C. Knight, Clarksdale, secretary. Meets second Wednesday each month, Clarksdale Hospital, Clarksdale, 1:30 p. m.

Delta Medical Society: J. W. Lucas, Moorhead, president; F. M. Acree, Greenville, secretary. Meets second Wednesday of April and October. Rotates through five counties, 2 p. m.

DeSoto County Medical Society: J. M. Wright, Hernando, president; L. L. Minor, Rt. 4., Memphis, secretary. Meets first Monday on January, April, July, October, Hernando, 10 a. m.

East Mississippi Medical Society: C. H. Gully, DeKalb, president; T. L. Bennett, Meridian, secretary.

Franklin County Medical Society: L. Costley, Meadville, secretary.

Hancock County Medical Society: A. P. Smith, Bay St. Louis, secretary.

Homochitto Valley Medical Society: Lucien S. Gaudet, Natchez, president; W. K. Stowers, Natchez, secretary. Meets January, April, July and October, 2:00 p. m.

Issaquena-Sharkey-Warren Counties Medical Society: T. P. Sparks, Jr., Vicksburg, president; Leon S. Lippincott, Vicksburg, secretary. Meets second Tuesday each month, Vicksburg, 7 p. m.

Jackson County Medical Society: W. J. Weatherford, Pascagoula, president; R. G. Lander, Pascagoula, secretary. Meets second Thursday of March, June, September and December, Jackson County Hospital, Pascagoula, 7 p. m.

Jefferson County Medical Society: W. T. Harper, Fayette, secretary.

Newton County Medical Society: W. T. Pennington, Decatur, president; Dudley Stennis, Newton, Secretary.

North Mississippi Medical Society: R. G. Grant, Holly Springs, president; A. H. Little, Oxford, Secretary.

Northeast Mississippi Thirteen Counties Medical Society: Z. A. Dorsey, Troy, president; A. J. Stacy, Tupelo, secretary. Meets third Tuesday, March, June, September and December.

Pike County Medical Society: J. L. Bauer, McComb, president; Elise Rutledge, McComb, secretary. Meets first Thursday each month, McComb, 6:30 p. m.

Pontotoc County Medical Society: L. O. Carruth, Tupelo, R.F.D., president; O. F. Carr, Pontotoc, secretary. Meets first Tuesday each month, Pontotoc.

South Mississippi Medical Society: J. Gould Gardner, Columbia, president; F. T. Bower, Hattiesburg, secretary.

Stone County Medical Society: Earl W. Green, Wiggins, secretary. Meets with Harrison-Stone-Hancock Counties Medical Society.

Tate County Medical Society: W. D. Smith, Senatobia, president; J. Sidney Eason, Coldwater, secretary. Meets second Wednesday each month, Senatobia.

Tri-County Medical Society: B. L. Crawford, Tylertown, president; R. B. Zeller, Hazlehurst, secretary. Meets second Tuesday of March, Copiah-Lincoln Junion College, Wesson; June, Walthal Hotel, Tyler- 7:30 p. m. town; September, Riverside Hotel, Monticello; December, Whitworth College, Brookhaven, 12:30 p. m.

Wilkinson County Medical Society: E. M. Butler, Centreville, secretary.

Winona District Medical Society: P. B. Brumby, Lexington, secretary.

MISSISSIPPI HOSPITALS—CALENDAR OF STAFF MEETINGS

MISSISSIPPI STATE HOSPITAL ASSOCIATION:

Eighth Annual Session, Meridian, May 10, 1937.

Anderson Infirmary: Second Friday, each month, 6:00 p. m.

Biloxi Hospital: First Friday, each month, 7:30 p. m.

Clarksdale Hospital: Second Wednesday, each month, 1:30 p. m.

George C. Hixon Memorial Hospital: First Monday, each month.

Greenwood Leflore Hospital: Second Monday, each month, 8:00 p. m.

Houston Hospital: Last Thursday, each month,

Jackson County Hospital: Second Thursday, each month except July and August. 7:00 p. m.

Jackson Infirmary: Last Tuesday, each month, 6 p. m.

Meridian Sanitarium: Second Thursday, each month, 6:30 p. m.

Mississippi Baptist Hospital: Third Tuesday, each month, 6:30 p. m.

Natchez Sanatorium: Second Tuesday, each month 7:30 p. m.

Northeast Mississippi Hospital: First Monday, each month, 7:30 p. m.

Rush's Infirmary: Second Thursday, each month, 7:00 p. m.

South Mississippi Infirmary: Last Thursday, each month, 5:00 p. m.

U. S. Veterans Hospital Gulfport: Every Monday, Tuesday, Wednesday, and Thursday, 10:45 a. m.

Vicksburg Hospital: Second Thursday, each month 7:00 p. m.

Vicksburg Infirmary: First Wednesday, each month, 7:00 p. m.

Vicksburg Sanitarium: Tenth or week of tenth each month, 6:30 p. m.

Winona Infirmary: First Thursday, each month, 7:30 p. m.

NOTES FROM THE GREENVILLE MEETING OF THE HOUSE OF DELEGATES

Tuesday Morning

The 33rd annual session of the House of Delegates of the Mississippi State Medical Association was called to order in the ball room of the Hotel Greenville by President J. R. Hill at 8 a. m., May 5. Following invocation by Dr. J. Rice Williams, the president turned the chair over to Speaker J. P. Wall.

Because of the absence of Secretary T. M. Dye, due to illness, Dr. N. C. Knight was chosen secretary pro tem.

A message of good will and regret for his absence was sent to Dr. Dye.

Roll call showed 57 members of the House of Delegates present.

The secretary's report was passed.

Treasurer E. Leroy Wilkins presented his report and it was referred to the Committee on Budget and Finance.

Historian Leon S. Lippincott presented his report.

Dr. D. W. Jones presented the report of the Committee on Publication.

Dr. Felix J. Underwood presented the report of the Committee on Public Policy and Legislation.

The report of the Committee on Constitution and By-Laws was presented by Dr. W. H. Frizell, and showed that no changes or additions had been proposed.

Dr. Felix J. Underwood presented a report as delegate to the American Medical Association.

On motion of Dr. G. S. Bryan and after discussion by Drs. D. J. Williams, W. H. Frizell, L. W. Long and M. D. Ratcliff, it was voted to approve a resolution adopted by the Northeast Mississippi Thirteen Counties Medical Society to perform no medical service for governmental agencies at fees less than regular and standard in the particular communities concerned and to instruct the delegates to the American Medical Association to bring the matter before the House of Delegates of that body and to ask cooperation.

Dr. V. B. Philpot presented the report of the Committee on Community Hospital Legislation, showing accomplishments and asking the doctors of Mississippi to conscientiously aid in carrying out the provisions of the new law. After discussion by Chairman E. R. Nobles and Dr. Joe E. Green, the report was adopted and the committee dismissed.

Dr. Felix J. Underwood presented the report of the Committee on Postgraduate Medical Instruction and gave figures on the courses in obstetrics already offered.

Resolutions approving and recommending the appropriation of $1500 for continuing postgraduate instruction and expressing appreciation to the Commonwealth Fund, Tulane University and the State Board of Health for financial and other assistance, were presented by Dr. Felix J. Underwood and adopted.

On motion of Dr. J. R. Hill, it was voted to allow $200.00 instead of $100.00 to defray the expenses of the incoming president.

Dr. G. Lamar Arrington presented an amendment to the by-laws "That only the elected delegate or his elected alternate may serve as delegate from the County Medical Society which he represents. Should neither the elected delegate nor the elected alternate be present the said county will not be allowed to substitute any other member." This was referred to the Committee on Constitution and By-Laws.

A letter from the secretary asking for a committee to advise him on selection of a suitable projection apparatus was referred to the president.

Dr. E. C. Parker, for the Mississippi State Hospital Association, presented resolutions adopted by that Association, extending thanks and appreciation for the fellowship, cooperation, the privileges and the benefits of meeting with the Mississippi State Medical Association and pledging continued loyalty and best efforts to improve the hospitals of the state. The resolutions were received.

Dr. Henry Boswell presented resolutions urging our delegation in Congress to lend every assistance possible to the passage of the meaure introduced by Senator Robinson and Representative Driver, appropriating $15,000,000 for beginning a program for providing sanatorium facilities for tuberculous patients, providing the measure meets the approval of the surgeon general of the United States Public Health Service. The resolutions were adopted.

The following nominating committee was elected: Drs. G. Y. Gillespie, Jr., S. E. Eason, R. B. Caldwell, J. K. Avent, W. H. Scudder, G. Lamar Arrington, R. H. Cranford, W. A. Dearman, and R. S. Savage.

Adjourned until Thursday.

Thursday Morning

Dr. W. H. Frizell, for the Committee on Constitution and By-Laws recommended that the proposed amendment to the By-Laws having to do with representatives of component societies be not adopted. The report of the committee was adopted.

Dr. John B. Howell proposed an amendment to the By-Laws to provide for a Committee on Resolutions. This amendment was approved by the Committee on Constitution and By-Laws and will come up for vote next year.

Dr. W. H. Anderson presented the following resolutions:

WHEREAS, on the night of April 5, Tupelo, Mississippi, sustained the third greatest disaster which has befallen any section in the history of the United States, when a tornado laid waste that beautiful little city causing the loss of 228 lives, injuring about 4,000 of its residents, and resultings in a property loss of more than $3,000,000, and

WHEREAS, the majority of the Tupelo doctors were in the path of the destruction and six of them suffered loss of property, their homes being either completely destroyed or greatly damaged, and the remaining number not escaping the ravages of the storm, and

WHEREAS, these doctors have given tirelessly of their skill and efforts to have life and minister to the injured from the hour of the disaster, and

WHEREAS, because of the disaster, none were able to attend this meeting, be it, therefore,

RESOLVED, by the Mississippi State Medical Association in sixty-ninth annual session assembled, that sympathy be extended to these brothers in the profession and admiration for their genuine heroism be expressed, and

WHEREAS, the hospitals of our state surrounding the stricken area and the hospitals of adjoining states opened their doors and rushed to the aid of the tornado sufferers, be it further

RESOLVED, that deep appreciation be extended to these hospitals, and be it further

RESOLVED, that copies of these resolutions be sent to the doctors of Tupelo, to the hospitals that received and gave aid to the tornado victims, and to the official publication of this Association.

(Signed) W. H. ANDERSON
R. B. CALDWELL
J. RICE WILLIAMS
G. S. BRYAN
J. R. HILL

The resolutions were unanimously adopted.

Dr. John G. Archer presented the following resolution and it was adopted:

WHEREAS, there has been planned and is now in execution the development of LEROY PERCY STATE PARK in Washington County, as a health and recreational center, and

WHEREAS, the State Park Commission, the Washington Park Commission and the Delta Medical Society have lent their approval and aid to this development, and

WHEREAS, there is in the park a warm spring with an abundant and constant supply of water of a temperature of 96.4 degrees F., equal (or better) in quality to waters which have elsewhere been made the basis of a worthwhile development, and

WHEREAS, the project proposed contemplates a publicly owned and maintained park without private exploitation and is unique in Mississippi, now, therefore, be it

RESOLVED, that we endorse and approve the efforts being made to establish Leroy Percy Park as a health and recreational center.

Dr. Felix J. Underwood offered a resolution favoring and endorsing the continuation of the medical school at the University of Mississippi and it was adopted.

Dr. J. C. Rice offered resolutions urging our United States Senators and Congressmen to use their efforts to prevent contracts by the Government with private physicians, and urging the legislature of this state to pass legislation creating the county medical society as the unit in all matters pertaining to public health and medical care.

After discussion by Drs. R. B. Caldwell, M. Q. Ewing, J. Rice Williams, G. S. Bryan, W. H. Frizell and R. H. Cranford, motion to adopt was lost.

Dr. Leon S. Lippincott offered the following resolution and it was unanimously adopted:

RESOLVED, that the Mississippi State Medical Association, in 69th annual session assembled, wishes to express its thanks for gracious hospitality and many courtesies to the City of Greenville, and its physicians, to the Delta Medical Society, to the King's Daughters' Circle, No. 2, to the press, to the hotels, boarding houses and private homes that have been opened to our members, to the Woman's Auxiliary to this Association, and to all others who gave generously of their time and talents to make the 1936 meeting a success.

Dr. D. C. Montgomery presented the report of the Committee on Budget and Finance. It found the reports of the secretary and treasurer correct and they were adopted. The following budget was recommended and adopted:

President's expense account	$200.00
Secretary's salary	500.00
Secretary's expense account	100.00
Editor's expense account	300.00
Council's expense account	100.00
Medical Journal	900.00
Transactions	300.00
Expense of annual meeting	50.00
Historian's expense account	50.00
Incidentals	50.00
	$2,500.00

Dr. H. F. Garrison read a telegram from Dr. Paul H. Ringer, president of the council and Mr. C. P. Loranz, editor of the Journal of the Southern Medical Association, extending greetings and best wishes for a most successful meeting.

Mrs. Leon S. Lippincott, retiring president of the Woman's Auxiliary to the Mississippi State Medical Association, was introduced and reported an increase of 79 members during the year; she urged the doctors in the counties where there is no auxiliary yet to encourage their wives to organize. She pledged the support of the Auxiliary to the Association, and closed by expressing appreciation to the doctors, the members of the Auxiliary and the people of Greenville for many courtesies shown during the meeting.

Reports of individual councilors were received without reading.

Dr. W. H. Frizell presented the report of the Council. After discussion by Drs. G. S. Bryan, J. Rice Williams. D. J. Williams and Joe E. Green, the report was adopted.

On motion of Dr. W. H. Frizell it was voted that the section of "The Mississippi Doctor" devoted to the Mississippi State Medical Association should be separate and distinct from other sections.

On motion, the president was requested to appoint a committee of three to consider the relations of this Association with "The Mississippi Doctor," and to make recommendations.

The Nominating Committee presented its report and the following officers for the year of 1936-1937 were elected:

President-Elect, Dr. W. L. Little, Wesson.

Vice-Presidents, Dr. A. L. Emerson, Hernado; Dr. Guy C. Jarratt, Vicksburg; Dr. C. C. Hightower, Hattiesburg.

Historian, Dr. Leon S. Lippincott, Vicksburg.

Editor, Dr. Leon S. Lippincott, Vicksburg.

Associate Editor, Dr. D. W. Jones, Jackson.

Speaker of the House of Delegates, Dr. J. P. Wall, Jackson.

Treasurer, Dr. E. LeRoy Wilkins, Clarksdale.

Secretary, Dr. J. R. Sims. Oxford.

Councilors: Seventh District, Dr. J. Gould Gardner, Columbia; Eighth District, Dr. W. H. Frizell, Brookhaven; Ninth District, Dr. Dan J. Williams, Gulfport.

Delegates to the American Medical Association: 1937, Dr. Hugh A. Gamble, Greenville; 1937-1938, Dr. Felix J. Underwood, Jackson.

Fraternal Delegates: To Alabama, Dr. G. Lamar Arrington, Meridian; to Louisiana, Dr. R. H. Brumfield, McComb; to Tennessee, Dr. I. B. Seale, Holly Springs; to Arkansas, Dr. Paul G. Gamble, Greenville.

Meridian was selected as the meeting place for 1937.

The president announced as a committee to advise with the secretary on the purchase of projection appartus, Drs. A. C. Covington, E. LeRoy Wilkins, and N. C. Knight.

President J. R. Hill introduced the incoming president, Dr. H. F. Garrison, Jackson. Both made appropriate remarks.

President Garrison announced that he had received the resignation of Dr. J. R. Sims as secretary and announced the appointment of Dr. T. M. Dye, Clarksdale.

The House of Delegates then adjourned to meet at eight o'clock on the morning of May 11, 1937, at Meridian.

FIFTY-ONE YEARS AGO

ABSTRACTS FROM THE PROCEEDINGS OF THE EIGHTEENTH ANNUAL SESSION

Greenville, Miss., April 15, 1885

The Association convened in Eighteenth Annual Session in the Opera House in the city of Greenville.

Owing to the absence of President Phares, Vice-President Gresham called the Association to order at 12 o'clock.

The session was opened with prayer by the Rev. Mr. Standifer.

Rev. Stephen Archer was introduced by Dr. Tombs. Mr. Archer welcomed the members of the Association and extended them the hospitalities of the city.

"When flesh and heart are failing, when lofty courage doffs its plume and trails its banner, before the terrible and silent march of pestilence, the true, brave and loving physician steps to the front and stands in the breach and grapples with the foe. In this unequal conflict, he wields the choicest armor with which God has endowed man—his intellect, his skill, his patience and his deep sympathy. He summons nature to unlock her secrets, and, as handmaid, minister to the sufferer. Thus he is able to cheer the sick. to encourage the faint, to baffle disease and court the return of ruddy health."

Dr. Hyer responded to the address of Mr. Archer, and thanked him for the generous manner in which he had welcomed us into their city.

On roll call the following Fellows answered to their names:

W. H. Daird, John Brownrigg, Matt Clay, C. M. Currell, J. C. Denson, S. R. Dunn, J. W. Dulaney, J. B. Gresham, W. F. Hyer, J. E. Halbert, F. M. Halbert, J. F. Hunter, Chas. H. Jones, B. F. Kittrell, Aurelius Martin, T. J. Murray, John B. Pease, P. W. Rowland, C. A. Rice, R. R. Stockard, E. P. Sale, J. Mell Smith, J. A. Shackelford, W. E. Todd, Wm. H. White.

PAPERS PRESENTED

Two Cases of Abscess of the Liver, treated by Incision and Free Drainage—Dr. J. H. Shackelford, Leota.

Removal of Nails—Dr. E. L. M'Gehee, Woodville.

Veratrum and Gelsemium Compared—Dr. J. Brownrigg, Columbus.

The Euphorbiaceae, or Spurgeworts—D. L. Phares, A.M., M.D., Prof. of Biology, A. and M. College.

Tracheotomy for Membranous Croup—Dr. Luther Sexton, Wesson.

Case of Traumatic Tetanus—Recovery—Dr. B. F. Ward. Winona.

Some of the Recent Improvements in the Treatment of Fractures—Dr. J. Brownrigg.

Report of a Case (Bilateral Abscess of the Neck)—Dr. W. H. White, Brandon.

Alcohol, Its Effect on the System in Health and in Disease;Or, To Put It More To the Point, Its Effect on the Physical Economy When Used as a Beverage Compared With Its Action As a Therapeutic Agent—Dr. J. C. Robert.

The Sanitary Examination of Water—Joseph Waldauer, Ph.G.

Cases Reported by Wirt Johnston, M.D., Jackson:

Abscess of the Liver.

Empyema (Pyothorax)

Two Cases of Hydrocephalus in Which Aspiration Was Performed.

Amputation of the Arm.

Wound of the Brachial Artery.

Two Cases of Fracture of the Arm Near the Elbow Joint.

A Case in Which Alarming Symptoms Were Produced by 1-4 of a Grain of Morphia Administered Hypodermically.

Vaginismus—Dr. E. P. Sale, Aberdeen.

Diagnosis and Treatment of Lacerations of the Cervix Uteri—Dr. J. H. Blanks, Meridian.

The Association adjourned to meet in Jackson the 3rd Wednesday in April, 1886.

MISSISSIPPI STATE HOSPITAL ASSOCIATION NEW OFFICERS

President—Dr. A. M. McCarthy, Electric Mills.

Vice-President—Dr. A. Street, Vicksburg.

Secretary and Treasurer—Dr. Leon S. Lippincott, Vicksburg.

Board of Directors—The above officers and Dr. H. A. Gamble, Greenville and Dr. V. B. Philpot, Houston.

DEATHS OF MISSISSIPPI PHYSICIANS DURING FIRST FOUR MONTHS OF 1936

Dr. Hugh Anderson, Sanatorium.
Dr. Philip Beekman, Natchez.
Dr. S. A. Brevard, Deeson.
Dr. Grover C. Davis, Pelahatchie.
Dr. Edwin C. Gillespie, Lambert.
Dr. Will Alex Gowan, Koscuisko.
Dr. Henry S. Gully, Meridian.
Dr. W. H. H. Lewis. Fayette.
Dr. Thorton Austin Moore, Holly Springs.
Dr. W. H. Pickering, Collins.
Dr. J. L. Rosebrough, Senatobia.
Dr. S. S. Thomas, Maben.
Dr. John Wm. Turner, Pontotoc.
Dr. A. J. Weissinger, Hernado.

DEATH STATISTICS FOR 1935

During 1935, 500 fewer deaths were recorded by the State Board of Health than during the previous year. Typhoid fever deaths reached an all-time low, there being only 61 throughout the state for the twelve-month period; this represents a reduction of 90 per cent since the year 1914. Another low record was that of only 93 deaths from diphtheria. Tuberculosis deaths totaled 1135, representing a 54 per cent decrease since 1914. Malaria deaths totaled 521; this is a reduction from the year 1934, but these figures are much higher than our low number of 211 deaths from malaria in 1931. There were practically 1200 cancer deaths last year, and 2400 deaths from diseases of the heart. Six years before, cancer deaths numbered 1000, and heart disease deaths 2134. Last year 518 homicides occurred in Mississippi—exactly the same number that occurred in the year 1930, which was the highest figure known in the state.

EXAMINATIONS FOR LICENSE

The Mississippi State Board of Health will hold examinations for license to practice medicine at the New Capitol, Jackson, June 22 and 23, 1936.

Examinations on the first two years will be held June 22. Applicants should send or bring certificates for verification.

Examination on last two years will be held June 23. Applicants should send or bring diplomas for verification.

Application blanks may be secured by writing to R. N. Whitfield, M.D., Assistant Secretary, Mississippi State Board of Health, Jackson, Miss.

FIELD REPRESENTATIVE OF STATE DEPARTMENT OF VITAL STATISTICS

Z. E. OSWALT

For several years the Director of Vital Statistics for the State Board of Health has needed the services of a full-time field man.

Owing to the fact that at least 6000 people in Mississippi are designated by law and by the rules and regulations of the Board of Health as responsible in the preparation of birth, death, and marriage records, it was felt that a good man should be in the field at all times making contact with these different individuals, and checking the efficiency of registration.

The central office requires practically all the time of the Director and he has few opportunities for going about in the state to carry on successful campaigns and investigation with reference to filing of vital records.

With the advent of the National Security funds, it was possible for the Board of Health to employ Mr. Z. E. Oswalt as field representative. Mr. Oswalt has had many years' experience as a county superintendent of education, and, in connection with his educational work, has taken a keen interest in health affairs. It is felt that Mr. Oswalt will be able to carry on this important work in a most satisfactory manner, and that through his efforts vital statistics registration will greatly improve, although it can be said that it has already reached a high degree of efficiency in spite of the fact that more than half the population of Mississippi consists of negroes and in spite of other factors which would mitigate against successful registration.

SCHOLARSHIPS FOR PUBLIC HEALTH NURSES

Nineteen Mississippi public health nurses have been granted four-months scholarships and are now studying at Peabody College, Nashville, Tenn. They are Miss Peggy Inez Stewart, State-at-large; Miss Eunice Pace, State-at-large; Miss Barbara B. Burris, State-at-large; Miss Ethel Dean Byrd, State-at-large; Miss Lucile Davis, Washington County; Miss Adelle Dearing, Leflore County; Mrs. Hilma Fraiser, Pearl River County; Miss Bessie Gaisser, Holmes County; Miss Myrtis Green, Covington County; Miss Lillian Hays, Forrest County; Mrs. Fay Buford Jordan, Sunflower County; Miss Lucie Lampton, Coahoma County; Miss Henrietta Moore, Warren County; Miss Evelyn Rinehart, Leflore County; Mrs. Stella Sylverstein, Hinds County; Miss Elizabeth Thornton, Monroe County; Miss Wilma Tullos, Lawrence County; Mrs. Louise Hull Webber, Attala County; Mrs. Janie Wilson, Jefferson Davis County.

AN APPRECIATION

"May 13, 1936

"Dr. T. M. Dye,
"Oxford Hospital,
"Oxford, Mississippi.

"Dear Doctor Dye:

"The Coahoma County Medical Society in session today unanimously missed you and we all regret very much that you could not attend.

"A resolution was offered, which passed *unanimously,* to instruct the secretary to extend to you this society's deepest sympathy and most sincere regrets at your recent illness. Words are very inadequate, and fail us, when we attempt to express to you our sorrow and most sincere sympathy in your misfortune. We all wish you to know that we are deeply interested in your welfare and are most anxious for you to return to us again. We all realize further that organized medicine suffers much in its progress when the guiding hand of one of its wisest and most able leaders is absent.

"Please permit us to say, once again that we extend to you our deepest sympathy in your illness and we are looking forward with much pleasure to the day, not far away now, when you will return to us again and we wish that there was some earthly means of conveying to you our real feelings towards you.

"COAHOMA COUNTY MEDICAL SOCIETY
"N. C. Knight, Secretary."

HOSPITAL APPOINTMENTS

Recent appontments of superintendents of state hospitals by Governor Hugh L. White have been announced as follows:

East Mississippi State Hospital—Dr. J. S. Hickman, Philadelphia.

Mississippi State Charity Hospital, Jackson—Dr. Toxey E. Hall, Shelby.

Mississippi State Charity Hospital, Vicksburg—Dr. Edley H. Jones, Vicksburg.

Mississippi State Charity Hospital, Laurel—Dr. Thomas R. Beech, Ellisville.

Mississippi State Charity Hospital, Natchez—Dr. Louis M. Magee, Prentiss.

ADAMS COUNTY MEDICAL SOCIETY

The regular monthly meeting of the Adams County Medical Society was held at the Charity Hospital, April 28 at 7:30 p. m. Those present were: Drs. W. K. Stowers, president; A. R. Perry, J. C. Rice, J. W. D. Dicks, B. Orendorf, and F. S. Dixon.

A letter from the Northeast Mississippi Thirteen Counties Medical Society was read. No action was taken on the proposed resolution.

A letter in reference to government contract work from the Northeast Mississippi Thirteen Counties Medical Society together with resolutons adopted by the society was read. No action was taken on the letter or resolutions inasmuch as the same was to come before the State Medical Association within the next few days.

Resolutions on the death of Dr. Philip Beekman were read:

On Friday, Feb. 14, 1936, death robbed us of our invaluable friend Doctor Philip Beekman—for Doctor Beekman, quite aside from his professional attainments, was an outstanding figure, physician, friend, and advisor to many.

For half a century this community of Adams county had been the scene of his untiring labors. Here he not only practiced medicine in all its branches, most ably and successfully, but here he was available at all times as a generous friend, a kind confessor, and a fountain of wisdom for many who did not need his skill professionally. His personality, his intellectual attainments and his unfailing sympathy and kindness combined to make him a great doctor, and a great and much beloved man. Fair in judgment, firm in conviction, always doing right as he saw it, he was most influential in many ways, and in all walks of life.

We, his friends and professional associates, record here our grief and sense of loss over the passing of our friend and kindly advisor, and we extend our sympathy and respect to his family, and our assurance that his name shall not be forgotten, but carried high as a constant reminder of the *man,* and what he stood for.

There being no further business the meeting adjourned.

F. S. DIXON, Secretary.

Natchez, May 9. 1936.

COAHOMA COUNTY MEDICAL SOCIETY

CLARKSDALE HOSPITAL MEDICAL STAFF

The Coahoma County Medical Society and the Clarksdale Hospital Medical Staff were called to order in the Nurses' Home of the Clarksdale Hospital at 1:30 p. m., April 15 by the president, Dr. J. A. Slack. He ordered the secretary to read the minutes which were approved as read.

Dr. W. H. Brandon then read a report of the bill recently passed by the legislature relative to the hospitalization of charity patients, which was generally discussed by everyone present.

The secretary then read an announcement from Dr. O. H. Beck, Greenville, relative to arranging for rooms at the meeting of the State Medical Association in Greenville.

The scientific program being the next order of business same was immediately entered into as follows:

"Novocain Anaesthesia in Obstetrics"—4 reel motion picture. Discussed generally by everyone present.

There being no further business the Society and Staff adjourned.

N. C. KNIGHT, Secretary

Clarksdale, April 27, 1936.

COAHOMA COUNTY MEDICAL SOCIETY
CLARKSDALE HOSPITAL MEDICAL STAFF

The Coahoma County Medical Society and the

Clarksdale Hospital Medical Staff were called to order in the Nurses' Home of the Clarksdale Hospital May 13, 1:30 p. m., by the president, Dr. J. A. Slack. He ordered the reading of the minutes which were approved as read.

Dr. N. C. Knight made a motion that the secretary be instructed to draw up resolutions expressing the regret and the sympathy of the Society relative to the present illness of Dr. T. M. Dye, sending a copy of said resolution to Dr. Dye, "The Mississippi Doctor," and publishing same in the local newspapers. Motion seconded by J. L. Levy and passed unanimously.

The Scientific Session being the next order of business same was as follows:

"Modern Methods of Anaesthesia"—4 reel motion picture. Discussed by all members present, generally and informally.

N. C. KNIGHT, Secretary

Clarksdale, May 15, 1936.

MONROE COUNTY MEDICAL SOCIETY

The Monroe County Medical Society met at Aberdeen, April 13. A good attendance was there in spite of a great deal of sickness in the county. Dr. W. N. Reed read a very timely paper on "High Maternity Mortality and Morbidity Rate."

The paper was very interesting as well as instructive. Dr. Reed brought several new thoughts. The paper was well discussed.

The meeting was called off for the first Monday night as all the doctors of the county who could answered the call of Tupelo for doctors to give first aid to its storm victims. They were, from Aberdeen: Drs. R. M. Boyd, N. S. Dixon, C. B. McCowan and J. B. Ward; from Amory: Drs. I. P. Burdine and W. N. Reed; from Smithville, Drs. T D. Summerford and B. C. Tubb.

Dr. M. Q. Ewing was sick with influenza but opened the doors of Gilmore Sanatorium until it was filled to capacity with injured. These patients received the very best treatment and were soon ready to return to Tupelo.

Miss Carty, head nurse of Gilmore Sanatorium carried her nurses, Misses Williams and Cochran, to Tupelo. These are a fine group of nurses. They proved interest in and ability to help poor suffering humanity by their untiring efforts to relieve and help the busy doctors relieve those bruised, bleeding and dying storm victims. The nurses left at the Sanatorium were just as busy with the patients sent them and just as willing and efficient as those who went to Tupelo.

The Mississippi State Medical Association meets May 5, 6, 7 at Greenville. I hope every doctor in Monroe county can be there. Rooms are all taken at the hotels. There will be some arrangement to care of you, go.

Dr. R. N. Whitfield, with the State Board of Health, Jackson was visiting Dr. G. S. Bryan, Amory, Thursday, April 23.

Dr. W. N. Reed, Amory, attended the Tennessee State Medical Association meeting in Memphis one day last week.

Dr. Felix J. Underwood, Jackson, was called back to his native county, Monroe, this week because of the death of his father. Our regret and deep sympathy go out to Dr. Underwood. We love him.

B. C. TUBB, County Editor

Smithville, April 24, 1936.

ADAMS COUNTY

The Adams County reporter journeyed on to Greenville and mixed with the boys and was glad to exchange greeting with Dr. Bryan, Dr. Hill, Dr. Gamble, Dr. Lippincott and many others.

It was a fine meeting and Dr. Fishbein made an address that was worth listening to by every one.

Glad Dr. Bryan is looking so well and fine again.

Our hope and prayers go to our beloved secretary, Dr. Dye, for his complete recovery.

Dr. Rice, Dr. Benoist, Dr. Chisholm and Dr. Perry were also at the meeting. They all seemed to enjoy it too.

Greenville with its beautiful homes, streets and flowers and trees gave us a most hearty and gracious welcome. We want to come again, Greenville, Queen City of the Delta, at some future time.

Hope some of those boys from Jackson won a nice jack-pot because judging from the noise they made, somebody was entitled to a great big jack-pot.

How about it Brother B——? I heard you had $35.00 in your jack-pot—is that so? Too little? And who in the H—— wanted breakfast at 5:30 a. m. and who would let nobody rest in that particular nest of the woods on 7th floor—?

Go to it boys, glad you could get away from home and have a rollicking good time. I won't tell your Pastor. Kind of envy you anyway.

LUCIEN S. GAUDET, County Editor

Natchez, May 9, 1936.

CHICKASAW COUNTY

Dr. W. A. Evans, for many years Health Commissioner of Chicago and former Professor of Tropical Medicine at the University of Chicago, was a visitor to Houston recently. He is the author of the column, "How to Keep Well," that was widely syndicated in leading newspapers of the country. Since retiring recently he is making his home in Aberdeen, his native town.

The occasion of Dr. Evans' visit was the graduating exercises of the Houston Hospital Training School for Nurses, where he delivered the graduating address, "The Conquest of Yellow Fever."

Dr. W. C. Walker, Houlka, is furnishing valuable information concerning Chickasaw County, which is preparing to celebrate its one hundredth anniversary in July. He is familiar with much of the early history of the County, which will be dramatized during the centennial celebration.

Drs. R. P. Donaldson and F. L. McGahey of Pontotoc and Calhoun Counties respectively were recently discharged from the Houston Hospital where each underwent an appendectomy.

We are pleased to report improvement in the condition of Mrs. S. K. Gore, wife of Dr. S. K. Gore. She has been confined to her room for several weeks, but is now much improved.

Mrs. W. B. Harpole, wife of Dr. W. B. Harpole, Maben, underwent a major operation at Houston Hospital during the past month.

We are sorry to chronicle the recent death of Mrs. Nettie Evans Moore, sister of Dr. Sid Evans and mother of Mr. B. E. Moore, pharmacist of Houston.

Dr. J. Rice Williams recently attended the meeting of the Grand Commandery of Knights Templar at Jackson. He and Mrs. Williams also attended the Grand Chapter meeting of O. E. S. at Meridian.

DOUGLAS D. BAUGH, County Editor.

Houston, May 15, 1936.

COAHOMA COUNTY

A large number of physicians in our county are planning to attend the meeting of the State Medical Association in Greenville. We are looking forward to seeing you there and will, of course, profit much by attending; by making new friends and reviving old acquaintances; as well as profiting materially by the scientific sessions.

We regret very much to report this month that illness and misfortune has befallen one of our leading and beloved members. Dr. T. M. Dye was ill for a few days with influenza and following same has developed an acute otitis media which has been complicated further by an acute mastoid. He underwent an operation for same in Oxford April 26. Our most sincere sympathy to Dr. Dye and every wish that he will soon be back on the job OK again.

We also regret very much that Dr. I. P. Carr's wife has been very ill but are glad to know that she is improving in the Methodist Hospital in Memphis.

Dr. I. W. Barrett was a business visitor in Memphis during the month.

Drs. E. LeRoy Wilkins and J. L. Levy have been pretty good boys during the month and should be commended for their conduct.

Dr. and Mrs. N. C. Knight have had as visitors this month Dr. and Mrs. E. J. Wetchter and daughter Joanna, of Speed, Indiana.

Dr. and Mrs. J. L. Levy have had as their visitors this month. Dr. Levy's father and mother of New Orleans.

Looking forward to seeing you all in Greenville next month, I am,

N. C. KNIGHT, County Editor
Clarksdale, April 23, 1936.

DESOTO COUNTY

On April 16, Dr. Alex J. Weissinger responded to his last call. He died after a brief illness. The doctor practiced his chosen profession near and in Hernando for forty years; he kept stride with the advancement of medical science and with an innate love of his work he was a successful general practitioner. He was the president of our local medical society and the meetings were in his office. We all will miss him. Besides many friends he left a wife and three children. His funeral was largely attended and many beautiful flowers were in evidence.

Dr. J. M. Wright, Hernando, vice-president of our local society, succeeds to the presidency.

Dr. and Mrs. Charles Whitley Emerson with their two children, Peggy and Whitley, Jr., have returned to their home in Hernando from New Orleans where Dr. Emerson has been taking a postgraduate course at Tulane.

The meeting of the State Association in Greenville was a success in every respect; we hope to see you in Meridian a year hence.

We missed Secretary Dye; Dye has been a very sick man, but we pray for an early and complete recovery.

L. L. MINOR, County Editor
Rt. 4, Memphis, Tenn., May 10, 1936.

GEORGE COUNTY

The George County Medical Unit was re-organized at a called meeting April 7, and application for charter has been filed with the District Councilor.

At this meeting all doctors in the county were present, Drs. A. K. McMillan, J. W. Horn, R. F. Ratliff. J. A. Dorsett, and J. L. Spiceland. Dr. R. F. Ratliff was elected president, Dr. A. K. McMillan, vice president, and Dr. J. L. Spiceland, secretary.

The first Friday night in each month was selected regular meeting date.

The unit met in regular session Friday night, May 1st. Dr. Horn gave a talk on the Topic "What I have observed and discovered in treating cold infections and flu," which was very interesting and informative. The subject was generally discussed, and proved mutually helpful.

The next meeting , 7.30 p.m. June 5, is anticipated with much interest. A banquet is planned, and all graduate nurses in the county, and neighbor physicians are to be invited.

The subjects, "Proper use of anaesthesia in labor," by Dr. J. A. Dorsett, and "Tannic Acid treatment of Burns," by Dr. J. L. Spiceland, will be presented.

DR. J. L. SPICELAND, Secretary
Lucedale, Miss.

LEFLORE COUNTY

Dr. Russell A. Hennessey, Memphis, was a visitor to Greenwood April 2.

Dr. J. A. Crawford, went over to Tupelo, April 6 to offer his services to the tornado victims.

At the meeting of the Delta Medical Society at Cleveland, April 8, the following attended from Greenwood; Dr. and Mrs. J. C. Adams, Dr. and Mrs. L. A. Barnett, Dr. and Mrs. L. B. Otken, Drs. Geo. Baskervill, S. L. Brister Jr., W. E. Denman W. B. Dickins, L. F. Ferguson, G. Y. Gillespie, Jr., F. M. Sandifer, and R. B. Yates.

Dr. Lee Kelly, Mayfield, formerly of Greenwood, now of Normal, Tenn., was a visitor to Greenwood, Saturday, April 11.

Dr. G. Y. Gillespie, Jr., visited Jackson, Monday, April 13.

Drs. J. A. K. Birchett, Jr., Vicksburg and John Darrington, Yazoo City, were in Greenwood, April 15th.

Drs. T. J. Barkley, Isola, and J. W. Barkley, Belzoni, passed through Greenwood Sunday, April 19 returning from the funeral of their brother, who was drowned at Starkville, April 17.

Dr. W. A. Burkhalter, Greenwood, has been confined to his bed about a month, suffering from chronic arthritis.

Dr. E. R. Shurley, Money, has returned from Walter Reed Hospital, Washington, D. C., and is able to attend to his practice again.

Dr. W. M. Duke, Sunny Side, has returned from Sanatorium and is able to be out.

Work on the new addition to the Greenwood Leflore hospital is rapidly progressing. The new operating room will be equipped by Mrs. Lizzie George Henderson, widow of the late Dr. T. R. Henderson of this city.

Drs. F. M. Sandifer and W. E. Denman will move their offices from the Raine Building to a residence at 110 E. Market, about June 1.

W. B. DICKINS, County Editor
Greenwood. May 2, 1936.

MADISON COUNTY

A full-time health department will be established in Madison County on July 1. A full-time health department is the ideal method for conducting modern health work, and it is hoped that within the next few years every county in Mississippi will enjoy the advantages of this particular method of prevention of disease among the citizens of the state.

In connection with the full-time health department for Madison County, it is planned to have a county registrar of vital statistics. The county system of registering births and deaths has proved to be a great success and enables physicians to register births with the least difficulty. The same is true for undertakers in registering deaths.

MONROE COUNTY

The Monroe County Medical Society postponed its meeting May 4 to May 11. because of the conflict with the meeting of the Mississippi State Medical Association at Greenville. All who attended report a good time and time well spent. Many interesting and instructive papers were read. All social events would be hard to equal. Those Greenvillians "Know Their Stuff" when it comes to entertaining their guests. Those who attended the state meeting from Monroe County were: Drs. J. M. Acker, Jr., N. S. Dixon and C. B. Love, Aberdeen; Drs. C. E. Boyd, G. S. Bryan, I. P. Burdine, and M. Q. Ewing (delegate), Amory.

We are having a few cases of pneumonia in Monroe County. It is in a severe form and hard to handle. More cases of malaria are showing up than we usually have at this time of the year.

Miss Josephine Aycock, daughter of Dr. and Mrs. W. J. Aycock, Calhoun City, is visiting in the home of Dr. and Mrs. B. S. Tubb, Smithville, this week.

B. C. TUBB, County Editor.
Smithville, May 12, 1936.

SUNFLOWER COUNTY

We were sorry to lose the services of Dr. H. L. Howard during the month of April. Dr. Howard had been practicing in and around Indianola since August of 1935. Dr. Howard received an army appointment and has been stationed in Brevard, North Carolina. Any young physician looking for a desirable location to begin practice would do well to talk with the physicians here regarding a future practice.

Dr. V. B. Harrison, Holly Springs, who formerly resided in Indianola during a period of training with the Health Department Training School, spent two days in the home of Dr. H. B. Cottrell.

Dr. I. B. Trapp, New Albany, stopped in Indianola on his way to the State Medical Convention in Greenville. Many of his friends here enjoyed short visits from Dr. Trapp.

Physicians from Sunflower County attending the Medical Convention in Greenville were: Drs. S. D. Newell, U. S. Wasson, J. W. Lucas, B. F. McNeal, G. J. Mancill, B. H. Higdon, W. H. Weeks, R. C. Smith, and H. B. Cottrell.

One of the colored physicians who was practicing in Indianola, Dr. M. A. Jones, died during the month.

H. B. COTTRELL, County Editor.
Indianola, May 9, 1936.

WARREN COUNTY

Last month the Woman's Auxiliary to the Issaquena-Sharkey-Warren Counties Medical Society entertained the doctors of this society at a seven o'clock dinner. This occasion was one of endearing charm and hospitality, unique entertainment, with lingering exhilarating recollections.

Mrs. C. J. Edwards, president of the auxiliary, opened the meeting after "coaxing forcibly" the doctors from the punch bowl; and she in turn called on Mrs. Leon S. Lippincott to become "spokesman" for the entertainment committee and under the "spell of her enchanting and eloquent words" the "cares that infested the day" for these attending doctors were dropped as a mantle from weary shoulders. Dr. Walter Johnston and his talented sister, Miss Martha Johnston, in the "Bridegroom and Bride" skit brought fun galore. Who would have thought that they of their own volition could mold their faces into an intelligent "expressionlessness" and hold same as unchanging as fate. The skit was comedy not a melodrama, it was an excellent introduction to the medley and melody of song that followed. These "auxiliary girls" divided the doctors into groups of fours making one quartette sing "Sweet Adeline" or "When You Wore a Big Red Rose" to be followed by the opposing team. Ike Knox won distinction, in his quartette, from the judges who said his voice in his quartette sounded like "soft vibrations of chanted melody or like the sound of a golden bell rung far down under humming waters" and Gus Street came in for *unusual praise* as his shrill tenor pierced the dense fog of melody as the gleam of sunlight strikes through the sky of storm. The occasion, we repeat, was most enjoyable, with one exception that is, it rather broke our faith in the correctness of the Scriptures. We are told that in Holy Writ it states. "There is nothing new under the sun," but we were sure this was wrong when we saw Dr. B. B. Martin, Sr., line up in the quartette when his name was called out as a singer. This was certainly "something new under the sun."

Dr. and Mrs. George Pattee of Denver, Colorado, were recent visitors in the home of Dr. and Mrs. Hugh H. Johnston. The two families were previously closely associated for some two or more years while the Drs. Pattee and Johnston were on the same section in their fellowship work at Mayo Clinic, Rochester.

Lake Providence, Louisiana, was the guest city on May 5, 1936 of the medical society and Dr. Laurance J. Clark of our city was the guest essayist. Dr. Clark was to have come from this meeting to the Mississippi State meeting at Greenville but "tacacardia, lethargic-energitis" or some other pseudo malady put him in reverse gear and he "never arrived."

We have just returned from the annual meeting of our State Medical Association which convened at Greenville. The attendance from Warren County was most creditable. To name the doctors who made the trip is like calling the secretary's roll but the following ones your editor saw or met: W. H. Parsons, Tom Sparks, Nathan B. Lewis, A. Street, Pierre Robert, F. M. Smith, Guy C. Jarratt, H. H. Johnston, Sidney W. Johnston, Edley H. Jones, B. B. Martin, Jr., Leon S. Lippincott, Walter E. Johnston, B. B. Martin, Sr., and G. C. Jarratt.

Your county editor recalls that when he last attended a state medical association convening at Greenville. he was a comparatively young man. He also recalls that on this occasion a "loving cup" was presented to Dr. Hendricks, of Hendricks, that the presentation speech was made by Dr. J. W. Lipscomb of Columbus, which was most befitting and eloquently said. He recalls that the late Dr. P. R. Brown of West Point, was one of the nominees for president, an ambition the good doctor cherished through the years but like Greely and Lodge of national political fame, never realized his ambition. Ye editor does not recall having ever attended a State Association prior to this one when Dr. T. M. Dye was not present. His absence was a distinct disappointment. At Greenville on this present occasion, we met again our friend of many years, Dr. S. R. Deans of West Point. Dr. Deans attended for his first time the Mississippi State Medical Association, May, 1884 or, fifty-two years ago. It was a great pleasure to note the animated interest that still lights up his face. We were greatly discomfited to find Dr. G. S. Bryan of Amory, though *young* and *agile*, possessed of an obsession.

He thinks the body of Sargent S. S. Prentiss is being disinterred yearly and reinterred in some cemetery in the city where our convention is being held. Surely some power can pluck out this fatal falacy from a distorted and overwrought mind.

DR. H. T. IMS, County Editor.
Vicksburg, May 11, 1936.

WASHINGTON COUNTY

Dr. J. W. Shackleford, Greenville, attended a convention in New Orleans, recently.

Mr. Cameron Montgomery, Jr., student at Wood-bury Forest, Virginia, spent the spring holidays with his parents Dr. and Mrs. D. C. Montgomery, Montbury, Greenville.

Dr. and Mrs. D. C. Montgomery, attended a convention in New Orleans, recently.

Mrs. J. C. Pegues attended the D. A. R. Conference in Jackson this past month.

Dr. William Hickerson of the Sanatorium staff conducted chest clinics in Greenville and Leland this month. These clinics are sponsored by the Washington County Tuberculosis Association and the County Health Department.

Mr. and Mrs. Rhea Blake have arrived from Bluefield, W. Va., and will make their home in Greenville. Mr. Blake will be secretary of the Delta Chamber of Commerce. They will make their home temporarily with Mrs. Blake's parents, Dr. and Mrs. T. B. Lewis.

Mrs. C. P. Thompson and Mrs. William Keady, Greenville, have returned from a trip to Benoit where Mrs. Keady had part in a musical program of the Woman's Club.

Dr. F. M. Acree and little daughter of Greenville have been visiting relatives in Dover, Tenn.

Mrs. F. M. Acree, Greenville, has returned from a meeting of the Woman's Club in Clarksdale.

Dr. George Eubanks, Greenville, medical officer attached to the 114th Field Artillery spent some time in Tupelo with the National Guard giving medical attention to storm victims.

Dr. and Mrs. D. C. Montgomery and Mr. and Mrs. Will Atterbury, Greenville, have returned from a visit to Bellingrath Gardens and points on the Coast.

Mrs. C. P. Thompson and Mrs. William Keady, Greenville, motored to Memphis for a short stay.

Dr. K. L. Witte of Leland was recently elected to the Board of Aldermen.

Mrs. T. L. Dobson, Leland, was hostess at a delightful party when she entertained the members of her club with a bridge luncheon at her home on Deer Creek Drive.

Dr. and Mrs. W. H. Priddy, Memphis, were guests of Mr. and Mrs. A. M. Lyell, Greenville, for the Mississippi Medical Convention.

Dr. and Mrs. John Lucas, Greenville, motored to Kansas City to attend the meeting of the American Medical Association.

Dr. C. W. Patterson, Rosedale, was the guest of Dr. John Archer, Greenville, for the Mississippi Medical Association Convention.

Dr. and Mrs. J. C. Pegues and three children motored to St. Joseph, Mo. where they were the guests of Rev. and Mrs. David Pegues. They later attended the meeting of the American Medical Association in Kansas City.

Dr. George Harden, Louisville, was the guest of Dr. and Mrs. T. B. Lewis, Greenville, for the Mississippi Medical Association Convention.

Dr. L. S. Gaudet, Natchez, was the guest of Mr. and Mrs. J. L. Boudreaux, Greenville, for the Mississippi Medical Association Convention.

Dr. H. R. Shands, Jackson, was the guest of Dr. and Mrs. H. A. Gamble, Greenville, for the Missisissippi State Medical Association Convention.

Dr. and Mrs. F. M. Sandifer, Greenwood, were the guests of Dr. and Mrs. C. P. Thompson for the State Medical Association Convention.

Dr. and Mrs. J. A. Beals, Greenville, had as their guests for the State Medical Association meeting Dr. and Mrs. H. L. Cockerham, Gunnison. ¼

Dr. and Mrs. Lamar Arrington, Meridian, Dr. G. Y. Gillespie, Greenwood, Dr. I. I. Pogue, Scott, and Dr. J. Rice Williams, Houston, were the guests of Dr. and Mrs. J. F Lucas for the State Medical Association Convention.

Dr. Perry, Natchez, and Dr. N. S. Dickson, Aberdeen, were guests of Dr. and Mrs. F. M. Acree for the Mississippi Medical Association convention.

Dr. J. W. Jackson, Belzoni, was the guest of Dr. and Mrs. O. F. Beck for the Mississippi Medical Association.

Dr. Harold Warwick, Fort Worth, Texas, Dr. James Stanford, Memphis, Dr. Charles McWilliams, Gulfport, and Dr. Billie Guyton, Oxford, were the guests of Dr. and Mrs. D. C. Montgomery, Montbury for the Mississippi State Medical Association Convention.

J. G. ARCHER, Editor

Greenville, May 11, 1936.

WINSTON COUNTY

We were delighted at the election of Dr. H. F. Garrison, Jackson, as president of the State Medical Association. Let's stay with him now in a cooperative way and make this one of our best association years.

Drs. W. W. Parks and W. B. Hickman, Louisville, attended the medical meeting at Greenville. The writer had anticipated going but for some obstetrical work expected could not attend.

Dr. T. C. Suttle and his fine boy were on the streets this week.

Dr. H. B. Watkins, Noxapater, our county health officer, was in Louisville this week.

Dr. E. L. Richardson is in Hot Springs taking treatment for rheumatic conditions. We hope he may get desired benefits from his treatments and return very much improved.

M. L. MONTGOMERY, County Editor

Louisville, May 9, 1936.

HOSPITAL STAFF TRANSACTIONS

NORTHEAST MISSISSIPPI HOSPITAL MEETING

The staff of the Northeast Mississippi Hospital met at the hospital in regular session on Monday night, June 1st. After partaking of a delicious dinner with Drs. Caldwell and Christian as hosts the meeting was called to order by President Caldwell. The scientific program was opened by Dr. H. B. Sutherland who gave a paper on Idiopathic Hyperchromic Anemia, and gave several very interesting case reports on this disease. There was discussion by several of the members. Our next meeting will be the first Monday night in July and Drs. Pharr and Crabb are to open the scientific program. Members present were Drs. W. H. Anderson, R. B. Caldwell, R. B. Cunningham, A. G. LeRoy, L. L. McDougal, Sr., S. L. Pharr, W. W. Strange, H. B. Sutherland and W. H. Sutherland. Miss Maude Childs and Miss Ruth Lokey, graduate nurses, were present as guests.

A. G. LeROY, Reporter.

Booneville, Miss.

VICKSBURG SANITARIUM

The regular monthly meeting of the staff of the Vicksburg Sanitarium was held Monday, May 11, and after a supper served at 6:30 p. m., was called to order by the president Dr. J. A. K. Birchett, Jr., with fourteen members of the staff present. The program included the following:

Business of the staff.

Reports from the Records Department and Analysis of the Work of the Hospital.

Report of Vital statistics from the Warren County Health Department—Dr. F. Michael Smith, Director.

Special case reports:

1. Rupture of Urethra With Extensive Urinary Extravasation.—Dr. A. Street.

2. Tape Worm Infestation—A Case Simulating Diphyllobothrilasis.—Dr. L. J. Clark.

3. Encephalitis.—Dr. R. A. Street, Jr.

Special Reports:

1. The Recent Meeting of the Mississippi State Medical Association at Greenville.—Drs. G. C. Jarratt, and R. A. Street, Jr.

2. The Recent Meeting of the Mississippi State Hospital Association at Greenville.—Drs. A. Street and Leon S. Lippincott.

Selected radiographic studies were demonstrated: (1) Osteogenic Sarcoma of Pelvis With Pulmonary Metastases; (2) Pott's Disease, Thoracic; (3) Spontaneous Pheumothorax; (4) Pulmonary Tuberculosis (two cases); (5) Sinusitis; (6) Cholelithiasis; (7) Double Renal Pelvis (two cases); (8) Colon Two Years After Resection of Carcinoma.

Three Minute Reports of the Literature of the month:

1. Leukopenic Reactions in the Diagnosis of the Causes of Asthma.—Dr. L. S. Lippincott.

2. Sclerosing Fluids In the Treatment of Inguinal Hernia.—Dr. J. A. K. Birchett, Jr.

3. Cervical Incisions in Dystocia.—Dr. R. A. Street, Jr.

4. Pre-operative Administration of Viosterol in Jaundiced Patients.—Dr. S. W. Johnston.

The next meeting of the staff will be held Wednesday, June 10, 1936.

ABSTRACT: RUPTURE OF URETHRA WITH EXTENSIVE EXTRAVASATION OF URINE

A. Street, M.D.

Patient: Colored, male, age 44, married, no children; admitted March 13, 1936.

CHIEF COMPLAINT: Fever, chills, prostration. Duration 2 days.

PRESENT ILLNESS: Has recently noticed some pain in perineal region and for last two days swelling of external genitals. No difficulty of urination. During this time has become rapidly worse. His mental condition is so confused that he cannot give a good account of his illness.

PREVIOUS HISTORY: Is said to have fallen astraddle a timber eight years ago and to have received a urinary tract injury. Claims that he has never had an instrument passed into the urethra. Had gonorrhea when young.

PHYSICAL EXAMINATION: Well developed and fairly nourished. Appeared violently ill and is semidelirious. Temp. 103°F.; pulse 122; resp. 26. General examination was otherwise not remarkable. Local examination showed the perineum swollen and tender. The swelling extended forward involving the scrotum and penis. The patient's statement that he had no urinary difficulty was doubted and he was supported and asked to urinate. He voided a small amount of clear urine. Examination of this urine showed only a rare pus cell and a few red blood cells.

DIAGNOSIS: The first impression was abscess, either periurethral or perirectal.

OPERATION: The patient was taken immediately to the operating room and under local anaesthesia the perineum was incised. A large abscess was entered, containing dark foul pus. The cavity extended forward, along the urethra to the penoscrotal junction. A counter opening was provided at this point and the cavity loosely packed with iodoform gauze.

OPERATIVE DIAGNOSIS: Periurethral abscess.

COURSE: The patient improved for 48 hours. During this time he was given repeated intravenous doses of 5 per cent glucose solution. On the third day, his condition was much worse. The oedema of the penis had increased and extended to the suprapubic region. The swollen tissues were emphysematous and the odor from the wounds very foul. Urinary difficulty developed. It seemed certain that we were dealing with urinary extravasation, secondary either to the periurethral abscess, or to urethral damage by recent instrumentation or otherwise, not given in the history.

SECOND OPERATION: Under gas anaesthesia all oedematous tissue was freely incised, carrying the multiple incisions well into normal tissue and freely exposing the deep fascia. There were numerous small abscess pockets of pus and of gas and areas of sloughing tissue, very foul. The penis was freely slit down to the corpora, and the sloughing foreskin was removed. The urethra was gently explored with a sound and a stricture encountered. Suprapubic cystostomy was done, using a 22F Pezzer catheter.

FURTHER COURSE: The wound was treated by continuous wet potassium permanganate solution dressings. Fluids were maintained by intravenous administration of 5 per cent glucose solution. He was quite weak and febrile for one week, and then rapidly improved. There was considerable loss of tissue but not enough to require skin grafting. April 9, filiform bougie was passed through the urethra and tunneled sounds passed over it 12 F. to 20 F. The suprapubic tube was removed on April 10. Five days later a No. 22 F. sound was passed. Most of the urine was then voided through the urethra. The patient was discharged March 18. The general condition was excellent.

REMARKS: In the presence of urinary extravasation it is imperative to freely incise all oedematous tissue and to drain the bladder by cystostomy. This patient would have done better if that procedure had been followed at his first operation. The reason for the delay was that in view of the history and operative findings, the condition was at first believed to be abscess, and the extravasation feature was not demonstrated until later.

ABSTRACT: ENCEPHALITIS

R. A. Street, Jr., M.D.

PATIENT: Colored, female, age 17, admitted to Sanitarium Feb. 4, 1936, with chief complaint of convulsive seizures for the past two days, gradually increasing in severity and occurring closer together, lasting from three to five minutes usually, at times, longer.

PRESENT ILLNESS: Began one week ago with weakness of legs, nausea and vomiting, general malaise and fever. Gradually became worse until two days ago when convulsions began. Has retained very little nourishment for the past forty-eight hours.

PHYSICAL EXAMINATION: Well developed and well nourished, acutely ill, in a partial state of coma; no response to questioning. Temp. 99°F.. pulse 80; blood pressure 110-70; respiration 18. During general examination there was a complete rigid convulsive seizure preceded by slight muscular twitching. The tongue was not bitten. Eyes were rolled upward. General examination showed nothing remarkable except for very active knee jerks. No changes in eye grounds noted on later examination and pupils reacted to light. Tongue was dry and coated and patient was apparently very toxic.

CLINICAL LABORATORY: Feb. 4: Blood: leukocytes 37,700; differential leukocyte count, small lymphocytes 43.3 per cent, large lymphocytes 11.6 per cent, neutrophilis, mature 21 per cent, band forms 23.5 per cent, eosinophils 0.6 per cent. No malaria found.

Urine: Sp. gr. 1.036, albumin 8 per cent (by volume), some coarsely granular casts, many bacilli and cocci; no pus or blood.

Spinal Fluid: Cells 11; mononuclears 40 per cent, polymorphonuclears 60 per cent; globulin increased (++); protein trace; sugar, qualitative, delayed reduction (++); colloidal gold, very slight reduction suggesting syphilis.

Feb. 5: Blood: urea nitrogen 34.56 mg. per 100 cc.; calcium 16 mg. Wassermann, Kahn, Kline and Young, and Eagle flocculation tests negative.

Urine: sp. gr. 1.027, albumin large trace, few coarsely and rare finely granular, rare hyaline and pus casts, some cocci and bacilli.

Feb. 6: Blood: leukocytes 16,400; differential leukocyte count, small lymphocytes 37 per cent, large lymphocytes 13 per cent, monocytes 3 per cent, neutrophils mature 29 per cent, band forms 16 per cent, eosinophils 2 per cent. No malaria found.

Urine: sp. gr. 1.026, albumin 2 per cent (by volume), no casts, numerous pus cells and fresh red blood cells, many bacilli and cocci.

Feb. 15: Urine: sp. gr. 1.009, albumin slight trace, many pus cells, many cocci and bacilli, no casts, no blood.

COURSE: Immediately given 500 cc. of hypertonic glucose solution (10 per cent) intravenously; luminal in two grain doses as necessary for restlessness. Condition remained about the same that day. May 5, 500 cc. of hypertonic glucose solution and 10 grains of calcium were given. Liquids were attempted by mouth and moderate amounts were retained. General condition remained about the same, although it was not necessary to give quite as much luminal for restlessness. Urinary output was greatly diminished. May 6, more liquids were retained. Again given 500 cc. of 10 per cent glucose solution intravenously and liver extract intramuscularly. Urinary output better. On examining the throat more closely, which was impossible at time of admission, it was noted that there was a grayish membrane covering the tonsils and part of the pharynx and the whole throat was edematous and reddened. Throat culture showed chiefly staphylococci. Feb. 8, the fourth day after admission, condition was somewhat improved and temperature was not as high. Again given 500 cc. of hypertonic glucose solution intravenously and liver extract intramuscularly. Urinary output was much better. General condition improved steadily from this point and temperature was normal on the 11th day after admission. Discharged on 12th day after admission, very much improved; mental condition had entirely cleared. Blood pressure had remained normal through out stay.

COMMENT: This case was interesting from a standpoint of diagnosis and from a standpoint of outcome. Uremia had to be considered as a possible cause of the convulsions but against it were the normal blood pressure, the only moderately increased blood urea nitrogen and the absence of blood from the urine. The marked state of dehydration was probably the cause of the kidney disturbance, which rapidly cleared as body fluids approached normal.

ROLL OF HONOR

The following have contributed to the Mississippi State Medical Association section of our journal this month:

COUNTY SOCIETIES: Adams County, Dr. F. S. Dixon; Coahoma County, N. C. Knight; Monroe County, B. C. Tubb.—3.

COUNTY EDITORS: Adams, Lucien S. Gaudet; Chickasaw, Douglas D. Baugh; Coahoma, N. C. Knight; DeSoto, L. L. Minor; Leflore, W. B. Dickins; Madison; Monroe, B. C. Tubb; Sunflower, H. B. Cottrell; Warren, H. T. Ims; Washington, John G. Archer; Winston, M. L. Montgomery.—11.

HOSPITALS: Clarksdale; Vicksburg Sanitarium. —2.

OTHERS: J. R. Hill; H. A. Gamble; W. L. Little; Felix J. Underwood.—4.

GRAND TOTAL—20.

YOUR EDITORS THANK YOU.

WOMAN'S AUXILIARY
TO THE
MISSISSIPPI STATE MEDICAL ASSOCIATION

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Jackson

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Hattiesburg

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Greenwood

Second Vice President .... Mrs. H. C. Sheffield
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Alcorn County Unit of Northeast Mississippi, Mrs. C. F. Gilbert, Corinth, Miss.

Central Medical Society, Mrs. Temple Ainsworth, Green Court Apts, Jackson, Miss.

Clarksdale and Six Counties, Mrs. Julius Levy, Clarksdale, Miss.

Delta Medical Society, Mrs. H. L. Cockerham, Gunnison, Miss.

East Mississippi Medical, Mrs. H. Lowry Rush, Meridian, Miss.

Harrison-Stone-Hancock, Mrs. J. S. Laird, Gulfport, Miss.

Biloxi Unit Harrison-Stone-Hancock, Mrs. G. F. Carroll, Biloxi, Miss.

Issaquena-Sharkey-Warren, Mrs. C. J. Edwards, Vicksburg, Miss.

Northeast Mississippi and Thirteen Counties, Mrs. W. H. Cleveland, Tupelo, Miss.

Homochito Valley, Mrs. L. S. Gaudet, Natchez, Miss.

Tri-County Medical, Mrs. O. N. Arrington, Brookhaven, Miss.

South Mississippi Medical, Mrs. L. H. Martin, Hattiesburg, Miss.

The meetings of the state auxiliary in Greenville were well attended and highly profitable. Mrs. J. Bonar White, of Atlanta, Ga., and ex-president of the Southern Medical Auxiliary, was again our guest. With her inimitable charm as a speaker she brought many inspiring thoughts, her listeners attentive to every word. She also took the role of adviser on points of organization and administration within the units of the auxiliary. We hope Mrs. White will make her visits to Mississippi and the state meetings an annual trip.

The president of the Arkansas State Auxiliary was welcomed, and she graciously extended an invitation to the members of the Mississippi Auxiliary to be present at the Arkansas state meeting.

Mrs. Leon S. Lippincott achieved much during her year in the presidency and her administration shall be a lasting credit to her unceasing labor for a more extensive organization and a more active auxiliary.

When she turned over the gavel to her successor, Mrs. Adna G. Wilde, of Jackson, the remarks of the new president were so poignantly expressed, we quote: "I suppose every new president goes into office with high ambitions. How we would love to do great things. We begin to look about to see what should be done.

"It seems to me to be our duty to just carry on the two main points that our organization has decided upon:

"Friendship among ourselves, the fellowship that better acquaintance promotes. How can we best make this feeling of all being one big family grow? The answer is membership growth, which is extended organization.

"Then our work together along lines of health education, and with that our fund for the preventorium. How can we best further that? Again through increased membership, and back to organization.

"Now who can really promote organization? The councilors. So to the councilors I appeal for growth; to the past presidents I appeal for help and advice; and to all I appeal for cooperation."

Mrs. Wilde is genuinely interested in the work of the auxiliaries over the state, she has been active in her own auxiliary in Jackson, as well as in the state organization, and with her ability and zeal, a record year of progress is ahead.

CLARKSDALE AND SIX COUNTIES

Greetings to the members of the Mississippi State Medical Auxiliary from the Clarksdale and Six County Auxiliary members and best wishes for the incoming year to its new corps of officers!

It was a very happy occasion for the writer to be present at the recent state meeting and to report that four counties were represented in Greenville on May the fifth, Coahoma, Tunica, Bolivar and Tallahatchie, others attending the next two days.

The Delta Society is to be congratulated over the successful way in which it entertained the auxiliary and the doctors. The fellowship was most enjoyable, the gardens on display created a desire to beautify the homes of the members of those who were so fortunate to make the pilgrimage during their stay in the hospitable town of Greenville, and the programmes were most informative and entertaining.

Clarksdale and Six Counties Medical Auxiliary, although old in point of years but small in members, took on a new impetus after listening to the splendid reports given by the State officers and Councilors. Our auxiliary was grieved over the illness of Dr. and Mrs. Dye, who were unable to be present on that occasion. The deaths of Dr. J. W. Gray of Clarksdale and Dr. Gillespie of Lambert both cast a pall of gloom on this section of the state, and since the removal of Mrs. J. W.Gray to Memphis, we feel that we have lost one of our most interested auxiliary workers.

Dr. S. W. Glass and his wife have been unable to participate in our activities for the past few years on account of his ill health and because of their active work the auxiliary keenly feels its loss. To Mrs. S. A. Brevard, of Deeson, our heart goes out in deepest sympathy over the loss of Dr. Brevard, who passed away this spring and who so efficiently served his patients in Deeson.

The auxiliary has planned an outstanding project for the new year, the compiling of all the history of the pioneer doctors, druggists and health workers since the delta was populated. We feel to increase its membership and to complete this history of these faithful workers would be a splendid achievement in Clarksdale and Six Counties Auxiliary history.

(Mrs. Thack G.) Nina C. Hughes, Councilor

HARRISON-STONE-HANCOCK AUXILIARY

Dr. and Mrs. Dan Williams, Dr. and Mrs. E. C. Parker, Dr. LeBaron, Dr. M. M. Snelling and Dr. C. Williams, attended the meetings of the State Medical Association in Greenville.

Drs. A. F. and Margaret Caraway have a son Archibald Caraway, now serving his internship at St. Luke's Hospital. He completed his medical course in Memphis at University of Tennessee Medical School. Their daughter, Margaret, receives her degree in June from Louisiana State University.

Dr. and Mrs. Wallace Sheely have a lovely new home under construction on East Beach, Gulfport.

Dr. and Mrs. J. S. Laird are looking forward with pleasure to the graduation of their son, Raymond W. Laird, from Duke University, Durham, N. C. Dr. Laird will go up June 8 and he and his son will visit in Washington and other places in the east after the commencement.

Dr. W. A. Dearman, Gulfport, has moved to Whitfield, where he assumes his appointment on the staff of the wonderful new Mississippi State Hospital.

MRS. J. S. LAIRD, Councilor

SOUTH MISSISSIPPI AUXILIARY

Dr. and Mrs. C. C. Hightower, Charles and Elizabeth, Hattiesburg, have recently returned from a delightful visit in Austin, Texas, where they went especially to visit the "Power Exhibition" at the University of Texas. The Hightowers are proud of the record their young son, Charles, is making in high school. He has completed his high school course in three years, with honors. He also won first place in the District history contest. His mother is president-elect of the Mississippi State Medical Auxiliary.

Dr. and Mrs. H. L. McKinnon, Hattiesburg, have as their guest, Mrs. Dubose A. Vann, Jr., their daughter, of Gainesville, Fla.

Friends of Mrs. Erskine Ross, Jr., are happy to know that she has recovered from a recent major operation.

Mrs. H. Carroll McLeod and two children, Beckey and Hugh, Jr., are convalescing from recent illnesses.

MRS. J. P. CULPEPPER, Councilor

TRI-COUNTY AUXILIARY

The Tri-County Auxiliary, composed of Lee, Pontotoc and Itawamba Counties, met Tuesday, May 26, at the home of Mrs. N. W. Nanney, of Fulton, for a very delightful meeting. This is one of the new auxiliaries and is functioning admirably.

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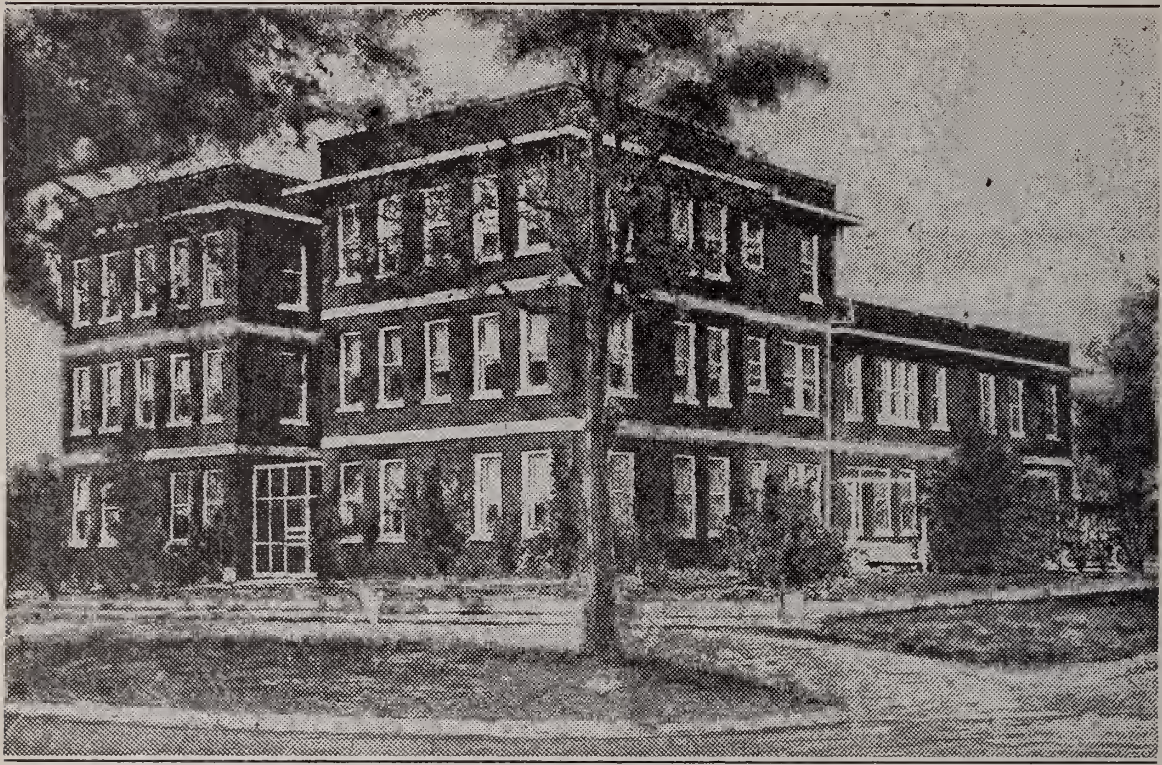

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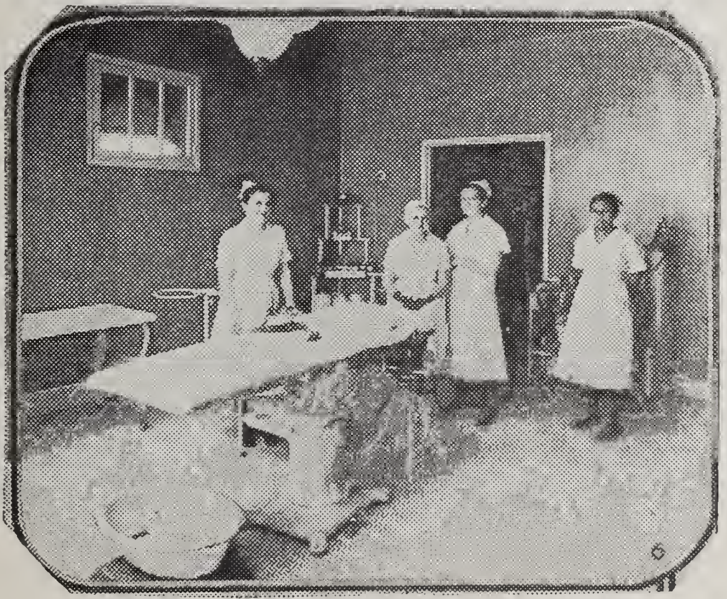

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The Mississippi Doctor

VOL. 14. BOONEVILLE, MISSISSIPPI, JULY, 1936 No. 2

ON HIS BLINDNESS*
(1655)

John Milton

When I consider how my light is spent
Ere half my days in this dark world and wide,
And that One Talent which is death to hide
Lodged with me useless, though my soul more bent
To serve therewith my Maker, and present
My true account, lest He returning chide,
"Doth God exact day-labor, light denied?"
I fondly ask. But patience, to prevent
That murmur, soon replies, "God doth not need
Either man's work or his own gifts. Who best
Bear his mild yoke, they serve him best. His state
Is kingly: thousands at his bidding speed,
And post o'er land and ocean without rest;
They also who only stand and wait."

**Milton persisted in writings in defense of the Cromwellian Protectorate which he felt meant liberty—religious, domestic and civil—and deliberately sacrificed what remained to him of light in the service of the cause to which he was devoted. He wrote "Paradise Lost," for which he is best known, after blindness overtook him.*

DIARRHEA

"the commonest ailment of infants in the summer months"

(HOLT AND McINTOSH: HOLT'S DISEASES OF INFANCY AND CHILDHOOD, 1933)

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roportions of dextrin and maltose. When there is a tendency to
oseness, I have used the preparation known as 'dextri-maltose,' for
carbohydrates; . . ."—*M. Ladd: Further experience with*
33:501-512, July, 1916.

In diarrhea, "Carbohydrates, in the form o
dextri-maltose, well cooked cereals or rice, usually
can be handled without trouble."—*B. B. Jones*
A discussion of some of the
infantile diarrhea, and the
the diets used in

"Dextri-maltose is a very excellent carbohydrate. It is made up of maltose, a disaccharide which in turn is broken up into two molecules of glucose—a sugar that is not as readily fermentable as levulose and galactose—and dextrin, a partially hydrolyzed starch. Because of the dextrin, there is less fermentation and we can therefore give larger amounts of this carbohydrate without fear of any tendency of fermentative diarrhea."—*A. Capper: Facts and fads*
in infant

SERIOUSNESS OF DIARRHEA

There is a widespread opinion that, thanks to improved sanitation, infantile diarrhea is no longer of serious aspect. But Holt and McIntosh declare that diarrhea "is still a problem of the foremost importance, producing a number of deaths each year. . . ." Because dehydration is so often an insidious development even in mild cases, prompt and effective treatment is vital. Little states (Canad. Med. A. J. 13:803, 1923), "There are cases on record where death has taken place within 24 hours of the time of onset of the first symptoms."

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rbed than cane or milk sugar,
by changing the carbohydrate
ne may prevent a deficient sup-
ly of sugar."
"When sugar causes diarrhoea
ne can change the form of it.
Mead's Dextrimaltose in small
doses is more quickly absorbed
and so superior to castor [cane
sugar. Lactose is expensive and
seems not to be better than cas
tor sugar."—*H. B. Gladstone*
Infant Feeding and Nutrition
William Heinemann, Ltd., Lon
don, 1928, pp. 11, 79.

In cases of diarrhea, "For the
first day or so no sugar should
be added to the milk. If the bowel
movements improve carbohy-
drates may be added. This should
be the one that is most easily
assimilated, so dextri-maltose i
the carbohydrate of choice."—
W. H. McCaslan: Summer diar-
rheas in infants and young child-
Alabama, 1:278-282

bowel and have a definite
laxative tendency, which ma
when carried to excess, cau
severe intestinal irritation.
"The more complex carboh
drates, of which dextrin is th
type, ferment more gradually an
do not have this laxative effect."
Regarding the treatment o
diarrhea, "In our experience, th
most satisfactory carbohydrat
for routine use is Mead's dextri-
maltose No. 1."—*F. R. Taylor:*
"Summer Complaints," Southern
Med. & Surg., pp. 555-559, Aug.

"If there is an improvement in
ments carbohydrate may be adde
ing the teaching of the originator
the carbohydrate added should be
most easily assimilated. Dextri-maltose is there-
fore the carbohydrate of choice."—*Summer diar-*
rheas in the young, International
9:111-118

treatment of diarrhea, "The sugar is added gradually as co
ditions admit, some sugar other than milk sugar or cane sugar bein
used, preferably dextrin and maltose."—*H. E. Small: Diarrhoea i*
bottle-fed infants, J. Maine M. A. 12:154-158, Jan. 1922.

"The condition in which dextri-maltose is partic
in acute attacks of vomiting, diarrhea and fever. It seems
covery is more rapid and recurrence less likely to take place if dex-
tri-maltose is substituted for milk sugar or cane sugar when thes
have been used, and the subsequent gain in weight is more rapid.
"In brief, I think it safe to say that pediatricians are relying les
implicitly on milk sugar, but are inclined to split the sugar elemen
giving cane sugar a place of value, and dextri-maltose a decidedl
prominent place, particularly in acute and difficult cases."—*W. D*
Hoskins: Present tendencies in infant feeding, Indianapolis M. J
July, 1914.

"It should
of lactose may cause diarrhoea. If a
centage of sugar be required it is better to replace
it by dextri-maltose, such as Mead's Nos. 1 and 2,
where the maltose is only slightly in excess of the
dextrins, thus diminishing the possibility of ex-
cessive fermentation."—*W. J. Pearson: Common*
practices in infant feeding, Post-Graduate Med. J.
6:38, 1930; abst. Brit. J. Child. Dis. 28:152-1
April-June, 1931.

transition to a whole milk or
evaporated milk formula, which will supply about
one and one-half to two ounces of whole milk to
every pound of body weight, is reached. This also
should finally have the addition of dextri-maltose
amounting to five to seven per cent."—*R. A.*
Strong: Summer diarrheas in infancy and early
childhood, Arch. Pediat.

that group of organisms thrive on) and high in sugar (the food
nate milk accomplishes this purpose. In our series of cases, we found
it was necessary to use the casein calcium for from 5-8 days; we
then stopped it and added dextri-maltose to the formula."—*A.*
DeSanctis and L. V. Paider: The value of calcium caseinate milk in
fermentative diarrhea, Arch. Pediat. 38:233-236, April

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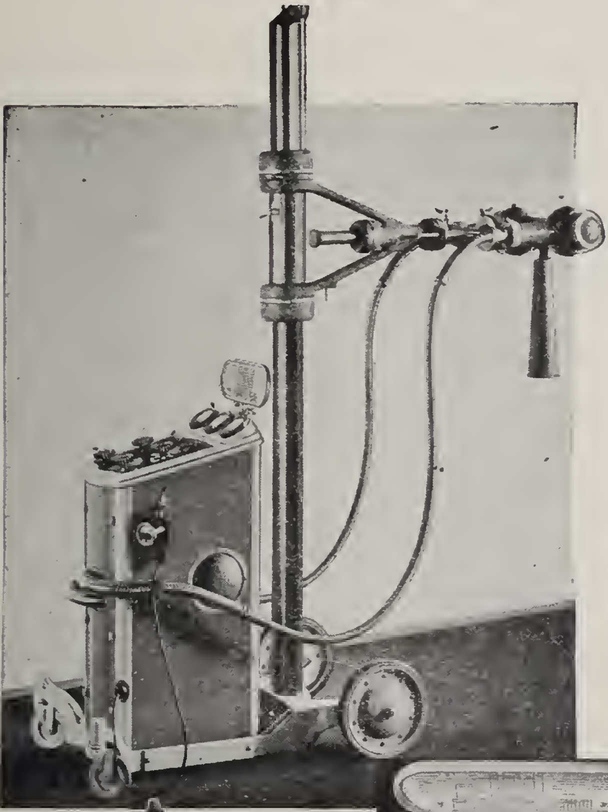

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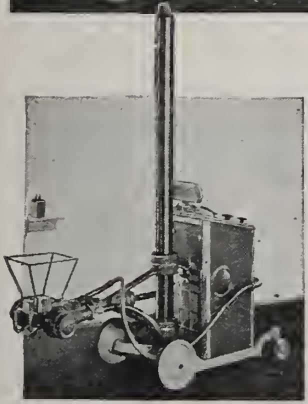

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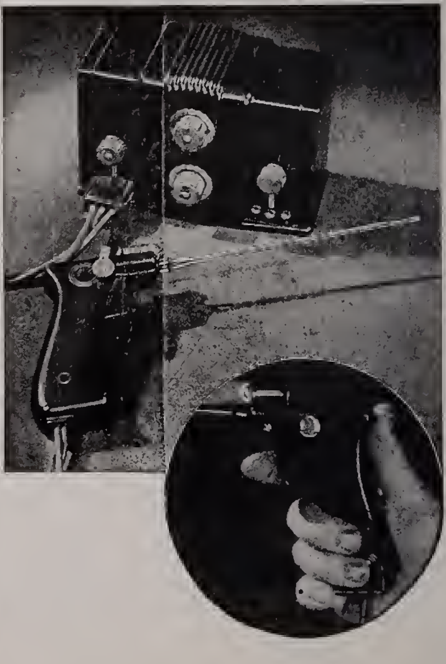

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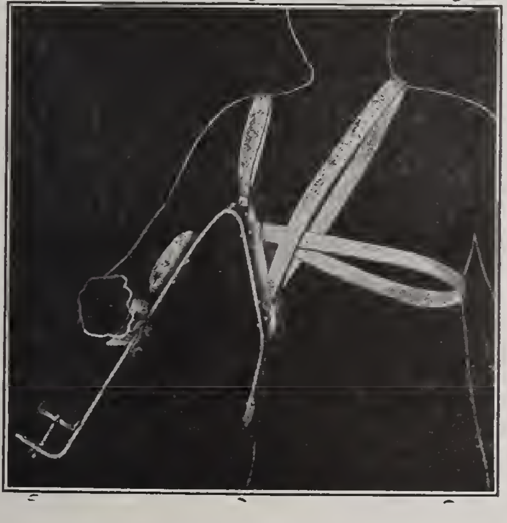

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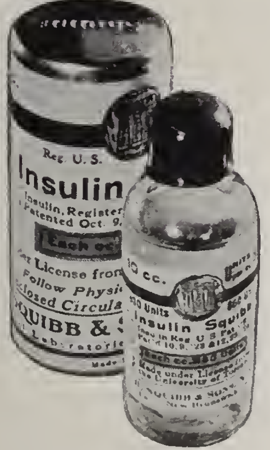

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Hints In the Diagnosis and Treatment of the Diarrheas*

W. C. ALVAREZ, M.D.
Division of Medicine,
The Mayo Clinic,
Rochester, Minn.

The first thing that one must do when a patient comes complaining of diarrhea is to make sure that one knows what he or she means by this word. This may sound foolish but it really is not. Actually I have seen many mistakes made because the physician simply assumed that because the patient said he had diarrhea, that is what he had. I always say, "What do you mean by diarrhea? Are your movements liquid or do you have many a day?" Sometimes one finds that there are only one or two movements a day, but they are mushy or liquid, or one may find that the patient has many movements, some of which are fairly well formed.

What is meant by diarrhea?

I recently saw a patient who failed to get well after two courses of treatment for amebiasis. I don't question that he had had amebiasis because he was treated by an able physician. As usual, I said to the man, "What do you mean by diarrhea? Have you loose movements?" His answer was that he had about twelve a day but they consisted of small, hard lumps of fecal matter. As you can see, that immediately put quite a different complexion on the matter. I remembered then that as I shook hands with him, his hand was unusually warm, and as I looked more carefully at his eyes I saw a peculiar staring expression. His basal metabolic rate was plus 65, and when a toxic goiter was removed he promptly recovered. Obviously, then, this man did not have diarrhea and the few amebas that he had in his bowel had nothing to do with his trouble. Their presence was only incidental, and there were probably too few of them to produce symptoms. The man went to the toilet many times a day simply because he was nervous and restless.

Here for example comes the charming wife of a physician, with the story that she has diarrhea and that several clinicians have strongly suspected tuberculosis of the cecum. The diagnosis was made largely on the basis of a few small changes in roentgenograms of the colon. I hate to make a diagnosis on such things alone; I like to take a careful history, and I want the history to support the laboratory or roentgenologic findings. So I said to this woman, "What do you mean by diarrhea?" Her answer was that all her life she had had a fear of getting diarrhea if she should go out in public, especially with a man. When she did get to the toilet she did not have loose movements and usually was unable to pass anything. Obviously, her trouble was due largely to fear of being unable to go to the toilet if a strong call should come. She was an intensely nervous girl who had been through a great deal of psychic strain, with a divorce and lawsuits over the custody of her children.

Another patient, a man, came in one day complaining of "dysentery" for which he had received much treatment with bismuth and opium. Again I said, "What do you mean by dysentery?" He said, "I have frequent, small, bloody bowel movements consisting mainly of mucus. I no sooner leave the toilet than I want to go back again." As usual, he brought with him several sets of roentgen ray films, but no physician had ever stuck a finger into his rectum. I examined his rectum and there as I feared, was a large carcinoma, too extensive to remove.

Last year I saw two interesting cases of what I call "amebaphobia." These two women complained of diarrhea, but when I went into details, I found that neither of them had frequent or soft movements. What they had was an anxiety neurosis. Both had been to Chicago and had stayed at a certain famous hotel. After they left, some helpful and kindly friend told them that everyone who went there got amebiasis and most of them died with it. All examinations were negative and they already had several treatments for amebiasis. I spent hours trying to remove this fear from the minds of these women and without much success. I have heard from one of them since to the effect that she is still going the rounds of doctors and is still demanding treatment for amebiasis.

Don't depend only on the history

Although, as you see, one can learn a lot about the cause of diarrhea by taking a good history, one mustn't depend on it alone because one can easily be fooled. For instance, one may find that a patient's diarrhea is markedly influenced by psychic troubles, or perhaps it began following a serious illness of a loved one; but still, on looking into the rectum, one may find lesions typical of ulcerative colitis. I believe that in some of these cases the psychic strain which first produced a nervous diarrhea may have paved the way for the development of a serious organic disease due to invasion of the colonic walls by pathogenic bacteria. Similarly, one man may recover from tuberculosis because he is optimistic and has everything to live for while another will go down hill and die because he is discouraged and worried over finances or the illness of some loved one.

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*Read before the 52nd annual meeting of the Mid-South Post Graduate Medical Assembly, Memphis, Tenn., Feb. 11-14, 1936.

Recently I saw a woman with a diarrhea which began during a very trying period when she was engaged in a most annoying lawsuit. I assumed at first that this must be a psychogenic diarrhea, but to my surprise, when I examined her colon I found a large carcinoma. That one can easily be fooled by the history was shown also years ago when I saw a big-game hunter who had returned from India with a diarrhea. This had been diagnosed as being due to amebiasis. He may well have had amebiasis but, when I examined him, I found that his main difficulty was a carcinoma of the rectum. Every so often also one will see a man who has had tuberculosis of the lungs and who, by all the rules of the game, should have a tuberculous enteritis but who really has a carcinoma or a chronic ulcerative colitis. Incidentally, I should say that so many of us physicians think of carcinoma of the colon as producing obstruction and constipation that it seldom occurs to us to think of this disease when a patient comes with what he calls a "bloody diarrhea."

The onset of the disease

I always like to ask a patient how the diarrhea began. What were the circumstances? Was any unusual food eaten, and were others who ate it made ill at the same time? For instance, here comes a young man with a story of two years of indigestion and occasional diarrhea. At a state fair he ate a hamburger sandwich. Hamburger steak is commonly a rich culture of bacillus enteritidis, and one of my friends, a professor of bacteriology, tells me that with what he knows about hamburger, he couldn't possibly ever touch a piece of it. My young patient became desperately ill a few hours after eating the meat and several others who went to this same fair also fell ill in the same way and some died. In this case I believe that the man would have been saved two years of invalidism if he had only been treated more carefully at the time of his acute upset. His physicians let him go back onto a full diet too soon, before the mucous membrane of his bowel had healed enough to carry on the work of absorption.

Common types of diarrhea

Emotional diarrhea—As I said before, emotion is a common cause of diarrhea. Many persons cannot think of going on a journey or of making a speech or of singing a solo or of going before a business group to arrange a big deal without suffering with diarrhea all day. Usually these people are a little ashamed of their weakness, so they avoid telling you about it, and you must dig the story out for yourself.

Constipation and diarrhea.—Another common type of diarrhea is due to constipation, with the resultant rotting of feces in the cecum. People will tell you that the diarrhea alternates with constipation. In many of these cases I think the patients suffer with a true typhlitis or inflammation of the mucous membrane of the cecum. I can usually cure them by teaching them to keep the lower bowel clean with enemas of physiologic saline solution.

Tuberculous diarrhea.—One must sometimes think of tuberculosis as a cause of diarrhea but one seldom encounters this type of enteritis unless the patient's lungs are badly involved.

Tropical diarrheas.—We used always to ask patients if they had been in the tropics, and sometimes the fact that they have traveled is helpful. Now we know that one can pick up amebiasis anywhere from the eating of foods handled by infected cooks or from the drinking of water contaminated as it was in certain Chicago hotels during the Century of Progress Exposition.

Achlorhydric diarrhea.—We used to read much about the morning diarrhea that is due to achlorhydria. In a typical case a man is forced to leave his bed around six o'clock in the morning in order to move his bowels. Now we find that achlorhydria is common and this type of diarrhea is rather rare. It is well, however, always in cases of chronic diarrhea to find out if the patient has acid in his gastric juice. If he hasn't it is well to give him a little dilute acid to see if it does any good. If it is going to help him, it will do so within a day or two. It is helpful also to know if the patient has acid in his gastric juice because, if he hasn't, it is possible that his intestinal disturbance is an early symptom of primary macrocytic anemia.

"Mucous colitis."—Occasionally a patient with so-called mucous colitis will come complaining of diarrhea, simply because he passes mucous at frequent intervals during the day. I don't like the term "mucous colitis" because it so often worries people and reinforces their tendency to develop an anxiety neurosis. I generally tell them that they have a sensitive colon and that it is not a disease. It is a handicap which they will probably have all their lives and which they can learn to live with.

Diarrhea after operation.—Occasionally I see a man with chronic diarrhea and edema of the legs and a scar on the abdomen of a gastro-enterostomy or what was supposed to have been a gastro-enterostomy. Sometimes careful questioning will show that food is appearing in the stools quite undigested and just as it was swallowed. Or the patient's wife may complain that his breath smells of feces. Inject some barium into the colon of such a man and usually you will find that it runs into the stomach, proving that he had a gastrojejunal ulcer which bored its way into the colon. It is easy to see in such cases why the man should have diarrhea. The edema of the ankles is due probably to the nutritional disturbances in the blood as a result of a lack of proper absorption of food in the largely unused, small bowel. Occasionally one will see a patient with diarrhea and edema of the legs and an exploratory operation will show that some inexperienced surgeon, in attempting to perform gastro-enterostomy, actually connected the stomach to a segment of the lower part of the ileum. Again the patient suffers from side-tracking of most of the small bowel.

Mild diarrheas.—When a patient consults me in regard to chronic diarrhea I always want to know how much weight he has lost and how well he has been able to stand the loss of food through failure of absorption. If, for years, the patient has had several loose movements a day without any great distress or loss of weight, I gain the impression that he has one of those possibly functional and certainly poorly understood forms of diarrhea which are compatible with fair health.

Diarrhea due to food sensitiveness.—In some of these cases we are beginning to find that the diarrhea is due to sensitiveness to some particular food. I know of one case in which the wife of a prominent physician was unable to leave her home for seven or eight years because when the diarrhea came, it was so explosive that she had to get to a toilet within a few seconds. Eventually, by keeping a record, she found that the trouble was due purely to the eating of chocolate. Several years now have passed without a return of the disease. Years ago I had the humiliating appearance of trying desperately and without success to help a physician who was badly afflicted with a diarrhea. Finally an old woman suggested to him that he stop taking milk, and that was the end of his trouble.

I think it wise, therefore, in all cases of puzzling diarrhea to keep the patient for at least a few days on a so-called elimination diet. My favorite one consists of nothing but lamb and rice, and butter and sugar. If this doesn't help matters within forty-eight hours, I may leave the patient on nothing but maple sugar for another two or three days, and if this doesn't help, I am fairly certain that no diet will ever be found that will bring relief.

Hints in diagnosis

Waking at night.—It is often helpful to know if the diarrhea wakes the patient out of his sleep at night and gets him up out of bed. If it does, he probably has actual ulceration of the colon; if it doesn't, he is more likely to have some one of the more harmless so-called functional diarrheas.

Tenesmus.—Another helpful thing to ask a patient with diarrhea is, "How urgent is the call when it comes?" The patient who can hardly get to the toilet in time and who feels a good deal of distress and tenesmus even after his bowels have moved, usually has considerable inflammation in the rectum. Sometimes he has a carcinoma there.

Hemorrhoids and cancer.—Remember always that the fact that a man has bleeding hemorrhoids does not insure him against having a bleeding carcinoma of the rectum. It's a sad fact that a large percentage of the patients whom we see every year with cancer of the rectum have recently been operated on for hemorrhoids. Even the man who performed the operation failed to notice the really important lesion lying a few inches above the anal ring.

Examine the rectum.—Always, in every case of diarrhea, examine the rectum with the finger and with the sigmoidoscope. It is well also to use the barium enema, and preferably, the double contrast enema. With this technic the barium suspension injected as an enema is passed by the patient, and then the colon is somewhat distended with air. With films taken stereoscopically, one can then see the inside of the wall of the colon and can recognize the presence of polyps and other small tumors.

If roentgen-ray examination of the colon fails to show anything wrong, the roentgenologist should give a barium meal by mouth and should watch it as it passes down through the small bowel. Particularly in cases of sprue the barium mixture will gather into rounded masses in the jejunum much as it does normally in the terminal coils of ileum.

Sore tongue.—It may be helpful to ask the patient if he has a sore tongue. If he has, you will think particularly of pernicious anemia and sprue. Look also for darkening of the skin of the neck and the hands and think of pellagra.

Appearance of the stools.—Ask about the appearance of the stools, and better yet, take a look at them. Often you can learn much. For instance, the patient with sprue often has a white, fatty, frothy, putrid smelling stool, the appearance of which will tell much to an expert.

The examination of the stools for amebic cysts, ova and parasites requires excellent training, and the laboratory worker must "keep his hand in" by frequent practice. Unless she is given special training the examining of stools is no work for the ordinary young laboratory assistant who can make white counts and urinalyses.

Numbness.—It is well, especially if the patient has a sore tongue, to ask about numbness, particularly in the legs and feet. This is often present in cases of pernicious anemia. Ask also if other members in the family have suffered with anemia.

Effect of treatment

Often I want to know if the patient has ever been well treated with rest and a low residue diet. If he or she tells me that good treatment has not had the slightest effect on the diarrhea I suspect that I, too, am going to have a hard time with the treatment and the chances are that I am dealing with one of those forms of diarrhea which are very poorly understood.

Unfortunately today many physicians seem to have only vague ideas as to the dietetic treatment of diarrhea, and actually, in many cases, patients tell me that they have been placed on an anticonstipation type of rough diet with many vegetables and fruits. Actually a good diet for diarrhea should at least theoretically, be bland and nonstimulating and without much residue for the colon.

A diagnosis is impossible in most cases.—It may be a comfort to some of you to know that in a large percentage of the patients with diarrhea who are studied most carefully with all the laboratory aids that are at the disposal of able clinicians in large institutions, no cause can be found for the disturbance. Roentgen-ray examinations will all be negative, no parasites or pathogenic bacteria will be found in the stools, a sigmoidoscopic examination will reveal a perfectly normal mucous membrane, the barium enema will show normal haustration, the gastric juice will contain acid, and the progress of a barium meal through the small bowel will be normal.

Amebiasis, although present, may not be the cause of the diarrhea

You physicians in the South must see many patients with amebas in the stools. It is well always, and especially in cases of diarrhea, to give such a patient one or two courses of emetine, and perhaps treparsol, to see if he gets any better. If he should not get any better, especially after all cysts have disappeared, then you should assume that your diagnosis was wrong and you should begin to look further for the real cause of the trouble. Remember that one can carry around a good many parasites without succumbing to their deleterious influences. I sometimes remind my patients that a few amebas or hookworms are like so many fleas. They are parasites and it's well to get rid of them, but they are not necessarily the cause of the indigestion or the fatigue or the other symptoms of which complaint is being made.

I know a man who, after living in the tropics for years, was examined on general principles and was found to have his stools swarming with every known variety of ameba. The expert who examined these stools had never in all his experience seen so many cysts in one specimen. Yet the man had never had diarrhea; he wasn't ill, and he felt no better when he got rid of his parasites.

I often think of the case of the president of a state university who, one day, worn out in a battle with hostile legislators, developed what was thought to be acute indigestion; when he was unable to carry on with his work he was examined thoroughly and a few amebas were found in his stools. When a course of antiamebic treatment failed to help him, some of his physicians wanted to give him another more strenuous treatment but his wise old family doctor strongly suspected that something else was at the bottom of the trouble far more serious than amebiasis. I felt as he did, and a few months later when the man died with his second stroke we were glad that we hadn't bothered him with more antiamebic treatment. All of which can serve again as a text for the sermon which I feel that I must keep preaching all the time, and this is that we physicians must not depend solely on laboratory aids for our diagnoses. We must continue to take histories and to use our eyes and ears.

Treatment

Acute diarrhea.—In cases of acute diarrhea many physicians start with a purgative. My feeling is that a man who has had from ten to fifteen movements during the day should be pretty well cleaned out. and hence I seldom see any reason for giving his bowel the extra insult of a dose of castor oil. Sometimes an enema of warm saline solution will give comfort and will allow the patient to quiet down and get some sleep. At this stage of the disease it may help to give an occasional teaspoonful of paregoric to relieve tenesmus and pain. Usually I like to starve the patient for a couple of days so that the mucous membrane can get a rest. After that I permit only a gradual return to a full diet. I usually begin with a diet of beef, rice and sugar—foods which leave almost no residue for the colon. I give plenty of water because the patient is losing fluids in the feces. If the diarrhea is very severe, fluid and salts will have to be given intravenously.

Sometimes I give kaolin or bismuth in tablespoonful doses several times a day so as to solidify the stool and thus help in killing bacteria and hindering their multiplication. They can grow best in a liquid medium.

Sometimes after the acute stage the patient gets constipated, partly because he hasn't been getting enough food out of which to make a stool, and partly because it takes two or three days before the colon fills up enough to overflow. In such cases it is often important to see to it that the patient does not take a laxative because that may start him off again on another attack of diarrhea. All he should ever take at this stage of the disease is an enema of physiologic saline solution. Tell him to add a tablespoonful of salt to a quart of warm water.

Chronic diarrhea.—In treating chronic diarrhea the first essential is a correct diagnosis, if this can be made. For instance, if you diagnose a nontropical type of sprue, the removal of fat from the diet, the substitution of plenty of meat and starch, and the giving of calcium and cod liver oil may work a miracle. Similarly, if you diagnose beginning pernicious anemia, the giving of liver or liver extracts will bring prompt improvement.

The use of drugs alone is often unsatisfactory, and if we stop a diarrhea too soon with opium the patient may say that he would rather have the diarrhea than the gas and bloating and distress which result from the locking within his abdomen of a lot of toxic material which his bowel wants to get rid of.

We physicians often wish that we had a good disinfectant for the bowel, but so far as I have been able to learn, no such drug is as yet available.

Avoid drastic treatment.—I cannot see why so many physicians continue to use bismuth-emetine-iodide, and other drastic drugs in the treatment of amebiasis. Patients commonly tell me of having been in the hospital for two or three weeks and having come out weak and thin and worn out. At the clinic, we generally use emetine for a few days and then treparsol or carbarsone or yatren. In most cases these simple remedies, which do not ordinarily upset the patient and which do not require his hospitalization, work a cure.

If you give dilute hydrochloric acid to a patient, don't keep him on it indefinitely unless it does prove very helpful. Remember that it commonly takes all the enamel off of the lingual surface of the two upper central incisors.

Chronic ulcerative colitis.—One of the worst types of diarrhea is that due to chronic ulcerative colitis. Fortunately, this is a fairly rare disease. I believe that it is due to a micro-organism and that it is a chronic, smoldering disease which must be treated in much the same way as tuberculosis is treated. The patient must get rest and expert treatment as soon as possible because, if he waits too long, he will at best be left with a badly scarred colon which can never be expected to work satisfactorily again. Serious scarring of the colon also predisposes greatly to the later development of carcinomatosis of the colon. The patients with ulcerative colitis must, therefore, have their disease recognized early, and they must be made to see that just as in the case of tuberculosis, they must get out of a strenuous or trying job; they must get rest and plenty of it, and they must get expert treatment.

Dr. Bargen has had so much success in handling these people that I believe that his methods and his serum must have decided value. It must be remembered also that these people have a long-lasting chronic disease, and they will probably have to watch their diet for a long time. They must keep up their strength and their nutrition. Otherwise they cannot fight the disease. Every so often we see patients who have been left much too long on a starvation diet or a diet which is decidedly inadequate in one or more details.

I think if I were to show you microscopic sections from the colons of a number of patients who had died of chronic ulcerative colitis, you would never feel like bothering again with irrigations in cases of this disease. You would see that in bad cases the infection has gone through the mucous membrane, or what is left of it, into the muscle and out through the veins and lymphatics of the mesentery into the lymph nodes and even into the blood. How childish it would be to think of curing such an infection by washing off the inner surface of the bowel.

Ileostomy.—Where I work we do very few ileostomies for chronic ulcerative colitis. The patient usually refuses to accept this miserable operation until he is extremely ill, and then the mesentery and all the tissues around the colon are so badly infected that any operation carries a tremendous mortality. When the ileostomy does work well, the patient usually returns within a year insisting that the stoma be closed, and as soon as this is done the symptoms commonly come back.

In bad cases a series of transfusions will sometimes give the patient the extra boost he needs to help him on the road to recovery. Dr. Bargen tells me that he can give relief in about 70 per cent of these cases with the help of bed rest, proper dieting, serum and vaccines and the removal of focal infections.

One of the greatest dangers to these people after they have recovered is the common cold. Any such infection, especially if accompanied by psychic strain, overwork and great fatigue, is likely to produce a flare-up in the symptoms.

Summary

In summing up, I would remind you again of the great value of a good history; I would urge you to look always on dirrhea as a possibly serious symptom and one which should be treated early and strenuously. I would urge you also to think always of carcinoma of the rectum when a patient comes with what seems to be an ordinary "bloody flux."

Ward Rounds—Part 5 Problems of Chest Surgery

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For the general practitioner as well as the surgeon the interest in this field should begin with injuries to the chest wall. Injuries may be limited to contusions or simple fractures of the ribs and again they may be associated with penetrating wounds of the pleura, lung and the great vessels within the thoracic cage.

Fractures of ribs which are not associated with damage to the pleura may cause only localized pain and painful respiratory movements. Most of such injuries are limited to the ribs between the 3rd and 10th. The first and second are rarely fractured without an associated damage to the pleura and lung which is evidenced by subcutaneous emphysema and bloody expectoration. I have only seen one fracture of the 1st and 2nd ribs in which subcutaneous emphysema was not noted.

Fractures of the 11th and 12 ribs are infrequent because of the amount of free motion permitted by lack of anterior fixation.

The treatment of simple fractures is not as easy as might be inferred from the general statement "strap the chest." The difficulties of strapping are particularly great in women with large breasts. I believe that the use of a spiral woven elastic bandage is the preferred type of dressing in these cases.

In cases of fractures where there is an associated hemothorax the difficulties of the problem are increased. It is needless to say that if the patient is in a state of shock the immediate problem is to treat the shock with heat, transfusions and morphine. If respiratory embarrassment occurs aspiration is indicated, followed by immobilization of the chest with the woven elastic bandage.

EMPYEMA

One of the common problems which confronts one is the treatment of empyema. Until comparatively recent years the mortality from this condition was very high. This was particularly true with reference to the acute cases in which an open operation was done at an inopportune time. In cases of influenza or pneumonia where a pleural effusion is found the fluid should be aspirated. If frank pus is not found open operation should not be done. Where frank pus is present my own preference and practice is subperiosteal rib resection at the most dependent part and tube drainage is instituted without the use of irrigating fluids within the pleural cavity.

The question of open or closed drainage in this type of case is still the subject of heated arguments. Good results are obtained by both methods.

I believe that well developed cases of empyema represent abscesses within the pleura and as such the same principles which guide us in the handling of abscesses elsewhere should be observed here i.e.—adequate drainage.

Graham advocates open drainage followed by the use of irrigation with Dakin's solution for the purpose of sterilizing the cavity and favoring an early obliteration of the same to prevent persistence of the sinus and a consequent chronic empyema. We must not overlook the fact that in a definite proportion of cases (about 15 per cent according to Graham) a pleuro-bronchial fistula is present. The existence of fistulae is a definite contra-indication to the use of irrigation because of the drowning type of asphyxia which results from the introduction of fluid into the bronchial tree.

Following rib resection and tube drainage, frequent change of dressing efforts to favor early re-expansion of lung, and shortening of the tubes results in a large percentage of cures. The persistent use of tubes until the rib has regenerated around them, thus forming a non-collapsible ring, will of course allow the condition to become a chronic empyema which will never get well until the non-collapsible sinus wall is removed by operation. Such a case is here cited.

Case J. S., age 9 years. Admitted to Touro Infirmary October 1st, 1935. Diagnosis: Chronic empyema. Patient was previously in Touro in March, 1932 when a diagnosis of post pneumonic empyema was made. On April 12th, 1932 a thoracotomy was done by another surgeon. Patient was discharged from hospital May 29th, 1932. Since that time the patient has been rather active. A thoracotomy tube has been in ever since her discharge. She has gotten along very well and has been able to attend school. The tube constantly drained purulent material. At times drainage would cease. The patient would complain of pain in the chest and fever would occur. The mother, at these times, would wash out the tube with water and considerable exudate would escape following which her temperature would subside.

My first contact with the patient occurred on October 20th, 1935 at which time the following notes were made. "There is a draining sinus in the posterior axillary line, corresponding to the 9th rib. Marked atrophy of muscles of right side of chest and retraction of right side of chest, below and to outer side of nipple."

"We believe the reason the sinus will not close is that there seems to be a bony tube where drainage tube used to be."

In the plain radiogram of the chest there is observed at this time an elongated cloudy area on the right side in the axillary region. The impression gained is that this is due to a markedly thickened pleura, but whether or not some fluid exists here cannot definitely be determined. The 9th rib near the posterior axillary line shows the central defect which is evidently the result of surgical procedure. The introduction of lipiodol through the fistulous tract communicating with the surface shows the opaque substance extending upward somewhat medially in the posterior aspect of the chest, apparently in the inter-lobar area. There is no evidence of communication with the bronchial tree."

Operation: November 20th, 1935: Pre-operative diagnosis: Draining sinus following rib resection for empyema.

A portion of the rib about three quarters of an inch on either side of the bony ring and including the bony ring was removed. The epithelial cavity which went through this bony defect was then separated down to its attachment to the pleura and removed. The visceral pleura could be seen as the lung moved with respiration. A small piece of rubber dam was inserted into the cavity and carried out of the skin to act as a drain. The muscles were then approximated loosely with two or three sutures of chromic catgut and a few interrupted sutures of catgut were taken in the skin.

The patient was discharged on December 25th, 1935. The sinus had healed.

Note made on May 11th, 1936 revealed the fact that there had been no further trouble since discharge from hospital.

COMMENTS: This patient had been treated by a competent surgeon who had used every imaginable trick known to the surgeon when handling a case until it was found four years later that the non-collapsible ring was present. After removal of this the empyema cavity became obliterated and the sinus healed.

In the after care of empyema it is urgent that exercises to cause re-expansion of the lung be carried out.

The size of the cavity can be measured from time to time with lipiodol. The use of lipiodol also enables one to determine the existence of a pleuro bronchial fistula.

Reverting for a moment to the use of irrigation or irrigating fluids within the cavity. I would remind you of the danger of irrigating pleuro-bronchial fistula by the citation of the following case:

Mr. J. W.: Patient had been treated for empyema for several months. A thoracotomy followed by Dakinization had been the method of treatment employed by the surgeons in charge. There is a persistent drainage sinus, productive cough and febrile reaction. Lipiodol was instilled into the sinus and this proved the presence of a bronchial fistula.

When pleuro-bronchial fistulae are recognized the temptation is great to resort to major surgical procedures in attempts to close these early. It should be remembered that many of these patients have been desperately sick and therefore supportive measures including transfusions, forced feeding, re-expansion exercise, lipiodol instillation and the use of gentian violet in the sinus are valuable temporarizing measures. If after months the sinus is not healed one can then proceed with surgery which should be suited to the particular case. In one case it may be necessary to do an extra pleural thoracoplasty, in another, partial cautery resection may be necessary. There is usually ample time to decide upon the method. **It should be remembered that the fistula may be a safety valve and therefore surgery in some cases is ill advised.**

POST-OPERATIVE PULMONARY COMPLICATIONS

Post-operative pulmonary complications are not as frequent as they were prior to the days of the expert anesthetist. Complications are still too frequent. Some are so grave immediately that it behooves us to consider every measure that will diminish their incidence. The most important measures are included under three headings: ,

1. Adequate examination so that no patient will have an elective operation in the presence of an upper respiratory infection.

2. The cooperation of the expert anesthetist who is not a routinist, but who after consul-

tation with the surgeon will select that anesthetic least likely in the particular case to be followed by pulmonary complications. Many are impressed with the idea that spinal anesthesia is not followed by post-operative pulmonary complications. This is an unwarranted assumption. If one must resort to statistics he will find even there that the idea is erroneous. A very important element of safety is added by proper care during inhalation anesthesia to prevent aspiration by the use of suction. Suction plays an important role not only in the presence of pulmonary complications but also in the relief of one of the grave immediate disasters—atelectasis, or massive collapse, due to obstruction with plugs of mucus. Aspiration by a bronchoscopist and hyperventilation with carbon dioxide and oxygen are valuable measures for immediate use in such cases.

It is surprising to note the rapid improvement which results from hyperventilation in patients who present clinical and physical evidence indicative of lack of aeration over certain portions of the lung field. **Adequate equipment should be available in all hospitals for immediate use of carbon dioxide and oxygen. Lives are saved in some instances by prompt action.**

True pneumonias are not as frequent as formerly. Infarction may result from embolic showers.

ABSCESS OF THE LUNG

Abscess of the lung is not so rare that we should not be ever mindful of the possibility of this serious post-operative pulmonary complication. Operations on the upper respiratory tract, such as tonsils and adenoids where adequate prophylactic suction is not utilized, are not infrequently followed by abscess due to aspiration.

Aspiration into the lungs of foreign bodies such as buttons, beans and small toys may and does produce lung abscesses. Many times these conditions are present for a long time before they are recognized.

When considering lung abscess one must not try to classify all of them as etiologically belonging to one type. Aspiration and embolism are probably the two most important factors, and abscesses developed from each may and do respond to different procedures. Those due to foreign bodies and infection from aspiration may be cleared up by bronchoscopic method as well as postural drainage. On the other hand abscesses that are near the periphery of the lung (of the infarction and embolic type) require surgical drainage. Before discussing further the treatment it would seem wise to devote a short time to the all important question of suspecting the existence of the condition for which proper treatment may be the only means of helping to save a life. All too often these unfortunates go on to the final chapter without a diagnosis.

Following operation the persistence of temperature, the presence of a productive foul cough, loss of weight and strength, suggest the need for X-ray examination. I say, suggest the need for X-ray examination, because physical signs are not nearly as conclusive as the X-ray findings. Once the diagnosis is made a definite program should be outlined. Medical measures, including postural drainage, bronchoscopic aspiration, and supportive measures should be tried first If these methods fail open surgical drainage is indicated. It is essential that the aspirating needle not be used either before or during the operation for the reason that if empyema is not already an associated complication the use of the needle would most certainly add this factor to the disease picture. The patient is already handicapped enough without adding to his trouble.

Operation should not be done in one stage if adhesions have not formed between the pleura and the lung. This can usually be determined by inspection after subperiosteal resection of the rib has been done. When adhesions have not formed the lung can be seen to move independent of the pleura during respiratory efforts. On the other hand, in the presence of adhesions the thick ring of pleura is not translucent. Under the latter conditions the cautery may be used to incise the pleura and lung in order to reach the abscess cavity. The cavity should not be packed except in the presence of hemorrhage. Hard rubber tubes should not be used and irrigation is dangerous. Soft rubber like the Penrose tubing is the most satisfactory. Frequent change of dressing is all that is necessary.

In the after care of these patients one should avoid attempting to close bronchial fistulae too soon. It is important that repeated transfusions be given if there is a marked secondary anemia.

TUBERCULOSIS

With the steady advance in knowledge with reference to diseases of the lung surgical indications have increased. Conditions formerly considered hopeless have responded to well planned operative procedures. As we look back on the story of tuberculosis we have this lesson forcibly impressed upon us.

It has been held for many years that rest was the prime indication, not only rest for the body but diminished activity of the diseased lung. For this reason pneumothorax, phrenic nerve surgery, (crushing, injection, section and excision) and extra-pleural thoracoplasty have become more and more accepted procedures. Not merely as last resorts, but as definite stages in a curative therapy.

The value of climatic influences in the management of pulmonary tuberculosis has become so thoroughly ingrained in the minds of the profession that even today many unfortunates are still denied the valuable methods which favor healing of the tubercular lung. We have been slow to accept the newer methods of approach in these cases. Pneumothorax is of proven value in the treatment of tuberculosis. It is not a difficult procedure, yet it is one which must be done with precision and its effects must be frequently checked by X-ray studies. It must be repeated at intervals over a long period of time if it is to be effective.

Graham and Singer state that in a series of 54 cases of patients who received pneumothorax over a period of two years, 68.5 per cent were clinically cured. With this single statement before us it is worthwhile for the internist, surgeon and the general practitioner to be familiar with the details of the procedure.

It is wise for us not to forget that pneumothorax is not as simple as "putting air into the pleura." Pneumothorax produces its effects in many ways, primarily by compression which favors approximation of the walls of cavities, ischemia of the lung and by diminishing the circulation through the lymphatics, and last but not least, we must not overlook the immobilizing effect on the affected lung.

According to all authorities the more nearly immobilization is obtained the better the therapeutic result. Pneumothorax is indicated particularly in unilateral disease and where adhesions are not present. It should be resorted to in cases where after several weeks of bed rest improvement has not resulted.

The actual procedure of pneumothorax requires meticulous care. The field should be prepared as for any other surgical procedure, the patient lying on the unaffected side. Local anesthesia is used and an intradermal wheal is raised, after which the tract the needle is to traverse is injected with novocaine down to and including the plura. Care should be exercised that we keep close to the upper border of the rib so as to avoid the intercostal artery which follows the under surface of the rib above. In order to avoid an undue amount of force in introducing the needle a small stab wound is made in the skin. Prior to introducing the needle into the pleura manometric reading should be made to ascertain that you are actually in the pleura. "A negative pressure reading indicates that you are in."

If negative pressure is not obtained you may be sure that you are not in the free pleural cavity. Once certain that you are in the pleural cavity air is allowed to go in slowly. From time to time manometric readings should be made. Respiratory distress is an indication to stop. Small quantities of air should be introduced at the first sitting—200 to 400 cc. at most. Never produce a positive pressure reading. Refills can be repeated as indicated by X-ray evidence of absorption of the air. It is important to maintain compression.

Where pneumothorax is insufficient alone, phrenicectomy is of great value. In cases not benefited by these measures extra pleural thoracoplasty becomes a great boon. This procedure had best be done in stages. Resection of all of the ribs from the 10th to the 1st inclusive is too extensive a procedure for one sitting.

By some, local anesthesia is preferred. Others with equal ardor advocate a general anesthesia. I can testify that general anesthesia can be used most successfully.

Miss S. L.: Diagnosis: Pulmonary tuberculosis. There has been a history of illness for many months with repeated pulmonary hemorrhages and in spite of the medical care which she has had, the patient has become markedly emaciated and is apparently on the down grade.

She was operated on in several stages. The first was a phrenico-exeresis. The second stage consisted of an extra pleural thoracoplasty, from the 11th to the 6th ribs. At the third stage from the 6th to the 1st, and at the 4th stage the 1st rib was resected.

A period of three years has now elapsed since the operation and when last seen she was in an excellent state of health, having gained a great deal of weight, not disturbed by cough, fever or other evidences of activity of the disease.

COMMENTS: As one considers this type of case the benefits from surgery give one a real thrill. One feels that such methods enables us to consider that real help has been given to the apparently hopeless type of case.

CARCINOMA OF THE LUNG

Carcinoma of the lung has until recent years been considered an extremely infrequent primary disease, and when found a hopeless attitude was assumed. All are familiar with carcinoma of the lung as a metastatic lesion, yet even in this group sufficient attention has not been paid to determining its presence before unwarranted surgery is proceeded with. This sounds like a rather harsh statement, yet it is true. Is it not a fact that many patients are operated for carcinoma of the breast without being given the benefit of a preliminary X-ray examination of the chest? I believe that all will concede that any so called radical operation on the breast when a lung metastasis exists cannot be radical, therefore, extensive operations on such patients are unwarranted. So much for that.

How about primary carcinoma of the lung? Is this a frequent disease? Is it diagnosed correctly at an early stage? If it is diagnosed can it be successfully operated?

Evidence is accumulating that primary carcinoma of the lung is not an infrequent disease. It is estimated that it is the cause of 10 per cent of all primary malignancies. The majority, if not all primary carcinomas of the lung, are bronchogenic in origin. The clinical manifestations are often mistaken for tuberculosis or fungus disease or other diseases until it is too late. In order to make a diagnosis early we must be cancer of the lung conscious. If a cough persists and the sputum is negative for tuberculosis or fungi, it becomes our duty to resort to the sources from which we can obtain aid, the bronchoscopist and the radiologist, particularly the bronchoscopist because not only can he visualize a small lesion but he can also do a biopsy.

The X-ray appearance of primary carcinoma of the lung is usually a well defined "hilar shadow." At times the shadow represents not the tumor itself but the area of atelectasis produced by the obstruction of the bronchus. There are times, when the tumor has been present for a long period, that we get a picture of an infiltrative process involving the lower portion of the lung field on one side. There may even be present a pleural effusion which on aspiration yields a straw colored fluid which when centrifuged and stained reveals typical cancer cells. Such cases are already inoperable. It is surprising how long some of these cases survive after metastases have occurred.

Since surgery at this stage is inapplicable deep X-ray therapy offers some palliative hope. **X-ray must not at the present time be looked upon as primary method of treatment for carcinoma of the lung.**

Surgery at the appropriate time offers hope for cure. Recent reports are encouraging in cases where total pneumoectomy have been done.

I trust that the brief summary of the many problems confronting the profession in this field will serve a purpose.

1522 Aline Street.

Yellow Fever In Mississippi 1878-1905

Personal Recollections, Experiences, Reminiscenses, Autobiography and History

HARRIS ALLEN GANT, M.D.

Ex-President Mississippi State Board of Health

Chapter I

I have been asked by the Rockefeller Foundation to write something about my work in yellow fever epidemics in Mississippi, because of my having had extensive activity, in connection with the State Board of Health of Mississippi in trying to control the spread of the disease and further, because I am now an octogenarian, and there are few, if any, physicians living, who have had experience as far back as the fateful year of 1878, in yellow fever work. I am, probably, one of the "Last of the Mohicans." As is usual with old people, my memory of the incidents of early days is much more vivid than the recollections of late years, and although I write from memory, the statements made may be relied upon as true to the facts. I am given great latitude as to style and subject matter.

AUTOBIOGRAPHY

I was born in Columbia, Tennessee, where I am now living, on March 28, 1852. My father was John Gant, and his father, William Gant, came from North Carolina in the early part of the 19th century, and settled on Carter's Creek in this county. My mother was Martha Jane Cocke Gant, daughter of Richard Cocke, who lived on a tract of land between Bear and Ruterford Creeks, in this county, granted to him and his brother, by the State of North Carolina. My paternal grandmother was Lesey Norwood, descended from the Norwood family of North Carolina. On my mother's side, our family is distantly related to the Deshas of Kentucky. I had five brothers, Richard Cocke, William Washington, John Norwood, Albert Sandidge, and Walter Desha; and two sisters, Lesey Jane and Ella Desha. The last named died in early childhood. Of our large family only William W., Albert S. and I remain.

When I was about three years old, my father's family moved to DeSoto County, Mississippi, and several years later to Oxford, the site of the University of the State, in order to have educational advantages for the children. We lived on a farm, about a mile south of town, on the main public road leading to Water Valley, Coffeeville, Grenada, and the South. Many happy days were spent at the old home place. but the most vivid impressions I have of the scenes of my boyhood, are of seeing Grant's Army in December, 1862 passing our home, and returning, in a few days, after being forced to retreat, having gone as far south as Coffeeville, because of the famous raid into Holly Springs, by that gallant Confederate General Van Dorn. He cut off Grant's base of supplies and caused a hurried retreat of the Federals and a change of their plans as to the march to Vicksburg, their objective point. During this time, a regiment of Federals was encamped on my father's place, and I can still see the devastation and ruin that was wrought in a few hours. Every living thing that could be eaten, was killed. The skins of cows, calves, hogs, chickens and other animals were scattered all over the place the next morning, after the arrival of the Blue-coated Soldiers. Corn, fodder, and all other feed stuff was taken from the barn. All fences about the place were torn down for more than a mile, and even the garden and yard palings and pickets were destroyed, the rails being used to make camp fires. The desolation was fearful.

My young life was dramatic and hard, for I lived through trying days of Civil War, and had to work on the farm to help support my mother, sisters and two younger brothers. My three older brothers were in the Confederate Army. My father, too, toward the close of the war, was enlisted in the militia. We were in extreme poverty, reduced almost to the point of starvation. When the war ended, I was sent to school in Oxford, and well prepared for entering the sophomore class, in the University of Mississippi, in the fall of 1868. My standing in class of forty-eight members, of whom I was the youngest except one, was satisfactory. John N. Waddell, an able divine, was chancellor at that time, and that wonderfully well equipped Christian educator, Dr. Landon C. Garland, was professor of physics and higher mathematics. Dr. Garland was later chancellor of Vanderbilt University.

In 1870 my father and family moved from Oxford to Water Valley, Mississippi, and having been impoverished by the war, was unable to keep me at the University, so, after completing the junior year, very much to my regret, I was compelled to give up the idea of graduating, and had to go to work. The public school system in Mississippi was inaugurated that year, and I taught school for nine months then had a position in a drug store, and read medicine at night. In the fall of 1874 I entered Vanderbilt University, and University of Nashville, the first year of the consolidation of the two schools. In the faculty were Menees, Nichol, Lindsay, Somers, Madden, W. T. Bridges, Paul F. Eve,Sr., Safford, W. K. Bowling, and T. A. Atchison. Only two courses of lectures were required for graduation in those days. Having had experience in the drug store business, I stood for, and won the medal in materia medica and therapeutics, offered by Prof. T. A. Atchison, although I had attended only one course of lectures. If I had not gained that little distinction, I believe I should have abandoned medicine entirely for I was much discouraged, run down, in bad health and about ready to give up. A very small thing often turns the destiny of a young man toward success or failure.

After spending the summer working on a farm, reading medicine when it was too hot for me to work, or I felt disinclined to work, my health improved, and I borrowed money to pay expenses for the next course of lectures and went to the University of Pennsylvania in October 1875, and graduated from that great medical school, March 10, 1876. In the faculty of the University in the Medical Department at that time were, Stille, D. Hayes Agnew, James Tyson, William Pepper, R. E. Rogers, Carson, Durhing, White, and others. "And there were giants in those days."

At the close of the term my health was again very much run down, and I stopped over here in Columbia to spend a while with my oldest brother and to recuperate. I came very near locating in this place, but while considering the matter, was notified that my father was very sick in Water Valley, and hastened home. After his recovery, I hung out my shingle, having secured a so-called office, over the drug store, and waited impatiently for patients who did not come very rapidly. Finally, I made up my mind that I had rather die trying to do something than to eke out such a miserable existence, and so I began to take every call I could get, from poor man, rich man, white man or negro, night or day, no matter hwo distant or the kind of weather. I became more interested in my work and studied my cases carefully and my practice began to grow, but I had not arrived at a satisfactory professional position when the great scourge of yellow fever of 1878 visited the South.

II

A this time the South had not fully recovered from the disastrous effects of the Civil War, and the domination of the negro rule, during the reconstruction period. A majority of the Mississippi Legislature had been black, and the negroes, scalawags and carpet baggers, with Adelbert Ames from Massachusetts as the military governor, were holding high carnival with the property and lives of the citizens. The white people and property owners were taxed to the point of confiscation, and the state practically bankrupted by the negroes in power. Social, political, financial and economic conditions were terrible. The South was impoverished. Then came the great epidemic spreading pestilence, famine, disease, death and destruction throughout the country. The beginning of my professional career was coincident with the epidemic. These were the days of pioneer medical practice. Doctors carried their drugs in saddle bags, rode horse back, and suffered many hardships. They remained oftentimes with their patients for hours, studying each case carefully, and had no trained nurses to assist them. They judged the condition of the patient by a careful study of the symptoms, and history of the case. They had no blood pressure instruments, but were adepts in the knowledge of the condition of the heart, as determined by the character of the pulse. The stethoscope was not generally in use. I remember my first thermometer. It was a glass tube, about four inches long, a large bulb of mercury in the bottom, graduated and marked, but not self registering. It was necessary to read it, while it was held in the patient's mouth. One of my first patients, an old woman in the country. thought she was much benefited by the use of this new instrument, for when, after about five minutes, I took it from her mouth, she exclaimed, "Lord, Doc., that thing has helped me already." We had not learned about appendicitis, hookworm, pellagra, or many other of the more recent diseases. Nor did we know anything about calories, vitamins, X-rays, violet rays, radium and the many other wonderful improvements of modern medicine used in the diagnosis and treatment of human ailments.

These were the days of many heated discussions of the Darwinian Theory of the evolution of life, and the germ theory of diseases as enunciated by Pasteur, and applied in surgery by Lister. I remember distinctly hearing a medical lecturer in 1874 telling the class of the chemical composition of urea, and how it could be formed by synthesis, outside the human body, when he made this statement, "I place no limit upon the inventive genius of man. The time will come when he, from dead inert matter, will be able to create a living organism." He was fresh from the schools of Germany, and was saturated with their teaching of evolution. I have been a close student of that theory, and have watched for a fullfilment of that prediction for more than fifty years, and must say, that the scientific world is no nearer the ability to create a living organism than it was in 1874. Yet I believe in evolution as a good working theory, but I believe more in the Bible as to creation.

Aseptic surgery was being advocated by some surgeons, condemned and laughed at by others. Lawson Tait claimed just as good results, by the use of plenty of water, as Lister claimed by the use of carbolic acid spray, and other antiseptics. Bichloride of mercury, and iodoform had not then come in to use as antiseptics. It was when everything of a contagious or infectious nature was thought to be conveyed by some invisible, intangible substance called formites. Just exactly what this was, no one knew, but it was supposed to cling to anything in the way of clothing, furniture, letters and other objects, and to travel through the air, especially at night. I remember an occurrence, while I was on the medical examining board in Mississippi. An old doctor from Alabama, presented himself to the board and wrote splendid answers to the practical questions, submitted to him, but when he struck the question, "What is Fomites?" he wrote in reply, repeating the question, "What is Fomites?" "Fomites, I do not know, never in my waking hours, nor in my wildest dreams, have I met this thing and, if I were to meet it in the middle of the road, I certainly would give it a wide berth." He certainly knew as much about it as any one else, and we issued his license to practice in Mississippi, without a single objection, from any member of the board.

The sanitary condition of the country was not good. The water supply was generally from wells, springs, and cisterns, and no piped water. Drainage was insufficient, many lagoons and swamps breeding mosquitoes. There were no screened houses. What a blessing to humanity was this screening of houses. It certainly has proved to be one of the most important accomplishments of modern sanitary science. Without piped water there were few, if any, sanitary toilets. Closets were mostly above ground, on the surface, but in some localities the vault system was in use.

Such was the condition of the country, when this, the most extensive, malignant, and fatal epidemic recorded in the history of yellow fever in the United States, came. It was possibly surpassed in mortality by the epidemic of 1853, but not in area of distribution, or damage to commerce, and loss of property, since there were only 17 towns and villages visited in Mississippi compared to 45 towns in 1878. It prevailed in eight states, and in more than one hundred localities, villages, towns, and cities in the United States, and extended north as far as Cairo, Illinois. The loss to property and commerce, was more than $100,000,000. It was especially fatal in Mississippi, Alabama, and Louisiana. New Orleans and

Memphis suffered horribly.

In Memphis out of a population of 17,600 there were 17,348 cases, and 5,500 deaths according to reports furnished me by Judge J. P. Young. "A history of Yellow Fever in Memphis, 1878" by J. M. Keating is a most valuable book loaned me by the Medical Library, Vanderbilt University, and is well worth reading for it is a most graphic description, not only of the great suffering and distress of the citizens, as well as the wonderful relief work of the Howard Association, and the sacrifice and heroic devotion to a sense of duty of many noble men and women, who freely gave up their lives trying to save others. Keating also reports on yellow fever at other towns besides Memphis. In Holly Springs there were 1240 cases and 346 deaths, or 1 in 3.2. In Grenada 1468 cases and 367 deaths, or 1 in 4, Nashville even had 96 cases, (all refugees from infected places) and 18 deaths or, 1 in 3.4, in Chattanooga, Tennessee in a population of 12,500 there were 693 cases, and 197 deaths, 1 in 4, in Cincinnati, Ohio, cases (or refugees) 49, with 19 deaths, or 1 in 1.2, in Collierville, Tennessee out of a population of 500 there were 121 cases, and 48 died, or 1 in 2.2, in Duck Hill, Mississippi there were 36 cases, with 14 deaths, or 1 in 2.3, in Fulton, Kentucky out of population of 1700, there were 12 cases, with 5 deaths, or 1 in 1.2. Many others could be given but these are sufficient to show the mortality. The fever prevailed in 45 towns and villages in Mississippi. Much data mentioned here is taken from Keating's History.

WATER VALLEY: My home town, the place where my battle was fought, was visited by yellow fever during the first days of August, 1878, brought from New Orleans. The first case was that of a railroad man, Kinney Lees. Dr. Stone of New Orleans had been called to make the diagnosis, and when he announced yellow fever, the greatest excitement and panic prevailed. People began refugeeing at once, leaving town in the greatest terror, and confusion. Many left by train as soon as possible for they knew quarantine would be immediately enforced by all other towns. Most went north by train, others to the country, and did not "stand upon the order of their going" but went any way they could. All trains on the Illinois Central Railroad from the South were soon discontinued, except through passenger trains carrying United States mail, and these were required to stop a mile south of town to discharge mail and any passengers who might have secured properly authenticated health certificates. The doors of the coaches were locked, the windows shut down, and the trains required to run through the town at a speed of about forty miles per hour. Local quarantines were the order of the day. The fever had been reported in several towns south of Water Valley, and then it was said to be in Grenada, only twenty-nine miles distant. All roads were strictly guarded, and as the people scattered out, the whole country around about was practically under the closest guard. Every man protected his own home from refugees, and each village, town, county and state had its special quarantine. There were no uniform systems between the towns, counties and states. Health certificates were required but these were not easily obtained at first, because of the general confusion. Towards the end of August, however, some sort of system was developed, and communications permitted though very scant and accompanied by many inconveniences. There were reports of persons having been shot, trying to evade the guards who oftentimes were very exacting and cruel. But notwithstanding the great panic and the excessive fear, no one, so far as I know was killed. All business was interrupted, stores closed, and the town of 3,000 population became a deserted village. The streets and unsanitary places were freely sprinkled with lime, and carbolic acid was strongly in evidence. The business part of town was on a single straight street, about a quarter of a mile in length, extending nearly a mile north and south, through the residential section. All along this street bonfires were built of pine knots, and tar to drive away the miasm, or infection whatever it might be. Possibly some mosquitoes were driven away, but the spread of the fever was not prevented. I distinctly recall what a lugubrious sight it was to go along this street, that was not otherwise lighted in the dead hours of the night, visiting patients from house to house.

It was some two weeks after the first case before a number of others were reported, and yellow fever declared an epidemic in Water Valley, about the 15th of August. Most of the doctors moved out of town, some for only a short distance, and until the disease became very prevalent, one or two of the doctors would return during the day time to look after the sick, the general opinion being that the fever could not be contracted during the middle of the day especially on bright sunshiny days.

MY ATTACK: On September 13 I was attacked at night, on returning from a visit to a friend, Josh Fly, who was dying. I had not been ill, but I remember distinctly while walking up the hill to my room feeling chilly sensations, and aching of my head and back. Within an hour I began to feel so miserable that I decided to take a dose of calomel and go to bed. Five other young men, and I, had secured rooms in the residence of my good friend, Mrs. M. J. Mayes, three-fourths of a mile from the business part of the town. On going into the house my friends remarked that I looked very flushed, and asked if I was sick. I said, "Yes, I do not feel at all well, and suspect yellow fever." My temperature was 102½, and the next day after spending a restless night, I registered 104. In the afternoon my friend, Dr. McFarland came in from the country to see me, for a few moments, and said, "It is no use trying to deceive you, for you know what you have." I said, "Yes, I have yellow fever, but there is no use dying with it." I immediately turned on my side with a feeling of perfect indifference as to the results. I have noticed in patients with yellow fever, this feeling of indifference quite frequently, after the first stage or onset, of the disease has passed. My case was quite typical, without complications, or very serious symptoms, except during the third night my temperature declined with perspiration, and I awoke, and drank a glass full of ice water, that had been left on the table near the bed, and in a short time became nauseated, and vomiting set in, which soon became black vomit, but fortunately was not profuse, and was relieved by the application of mustard plaster to the stomach, and by swallowing small bits of ice. My recovery was complete, and I was up, in the house, by the fourth of October, when my friend Lew Pennington, died across the hall from my room, with black vomit, the first case of 'projectile vomiting' I had ever seen. The contraction of his stomach ejected its contents several feet. After his death I gradually began seeing patients, until the last of November. In fact, some few cases were on hand as late as the first days of December.

Lew Pennington was about my age, anl he and I were close friends and before either of us was taken sick, each one directed the other, that in case of death he should collect the Knights of Honor Insurance policy, settle accounts and turn over the remainder of the money to the family of the deceased. After his death I sent his father in Lincoln, Nebraska the balance of a two thousand policy that remained after paying his debts. Lew Pennington was train dispatcher, and had a keen sense of honor, and a high regard for the responsibilities imposed upon him. He would not leave town. Just before the announcement of fever in Water Valley, he had asked me if I was going to leave town, should the fever reach us. I said, "No, I have made up my mind never to run from any disease." He said, "If you stay, I stay" and stay he did, and died a martyr. His attack was more violent than the average, he had a very high temperature to begin with, and was soon delirious, and on the third day developed black vomit, and began to sink rapidly. He had been a drinking man, and of rather reckless habits, but was a perfectly splendid, high-toned gentleman. When I saw there was no hope of his recovery, and that he would soon pass away, I said to him, "Lew, you are very sick, would you like for me to call a minister in to see you?" "No, Harris," he said, "There is no minister in town except Judge Fly, and he is so far out, we could not get him tonight. Besides, although I have been a pretty bad boy, I have said my little prayers, all along." Then I said, "Lew, won't you pray?" He said, "Yes," and motioning Tom, our faithful colored nurse, he said, "Tom, take off your hat." So we, Tom, my brother, and I knelt down, and Pennington prayed one of the most beautiful and touching prayers I ever heard.

The colored man, Tom, remained with me throughout my sickness, and was a most faithful and helpful servant. He did not contract the fever. My brother Albert S. Gant, nursed me with most careful and affectionate attention. He slept on a cot in the room, with me, and in so doing exhibited a degree of moral courage of the highest order. I have never forgotten, and shall never forget his devotion to me. Although non-immune, he did not have the fever. All the other young men in the house sought other quarters after I was taken sick so that my brother, Tom and I had a very lonely time, especially during the sickness and dying of our friend Pennington. There were no cases of fever developed from exposure to Pennington and me in that house. With the exception of the visit of Dr. W. J. McFarland on the second day of my illness, I had no medical service although during my convalescence, Dr. J. G. Davis, of Lincoln, Nebraska, made me one visit. He was sent to Water Valley by the Howard Association.

There were 300 cases of fever in Water Valley and suburbs, of whom 75 or more died. The names of some of those who died are as follows: J. E. Becton, R. A. Long, L. M. Pennington, Edstrom (child of Mrs. M. A. Gross), John Mattson, Petter Williams, Thomas Reasons, W. L. Bartless, Lees Kenny, Robert Prophit, Walter Reems, P. W. Pennel. N. U. Gartner, Mrs. Tom Trainer, A. C. Thorns, Mill Mollie Smith, Mrs. E. F. Smith, W. H. Johnes, Reese (child of H.) John McClure, A. B. Murphy, H. W. Freeman, Tom Walker, James Hall, E. Block, A. V. Simmons, Mrs. Reed, D. Donahue, Jack Howard, Mrs. Edstrom, Miss Jane Miller, B. W. Brewer, Lige Miller, G. W. Strong, Robert Townsend, Jeff Miller, William White, Clay McMillen, Mrs. Gartine, James M. Crops, Mrs. A. G. Buford, Gus Holmes, J. O. Hendricks, C. E. Summers, J. H. Fly, J. B. Taylor, William Goodwin, Mark E. Pate. These are all of the names at this late date that I recall, but there were others, among whom a few colored people. Most of the negroes had left town, and those who remained, and had fever, were not very sick. This disease was so mild among the negroes, that many of the doctors claimed immunity for the race, which of course, was not a correct conclusion. Quite a number of the best and most prominent citizens were lost, and it would be a fitting tribute to their heroic self sacrifice, to mention their names, and write up a tribute to them but I feel altogether inadequate to such a task. I cannot do that subject justice, for my memory fails me as regards many of the necessary details.

One of the outstanding characters of the epidemic was an old negro man, Bob Reed. He was immune, having had the fever in Natchez, many years previous. He was quite a character, the only Simon pure Democrat negro in the county, who made himself most useful in arousing interest in all Democratic club meetings by going up and down the streets with a red flag ringing a bell. He was the factotum among the young men of the town, waited on their rooms, looked after their clothing, nursed them when sick, and took general supervision over them. When the fever came, he remained in town, and made himself most useful in his assistance to both white and colored patients. He was looked to and called upon to secure food, to help bathe the patients, to give them enemas, to shave them and to help bury the dead. I shall never forget old Bob Reed.

This epidemic was a most virulent type, and caused the loss of from sixteen to twenty housand people in the South by death, of whom about 3500 died in Mississippi, and among these were thirty-five or forty doctors. The names of twenty of the doctors who died are recorded as members of the State Medical Association, and nearly an equal number of non members were reported dead. The State Board of Health was organized the year before, but without funds. Four of its members fell victim to the fever, Compton, Hughes, Whitehead, and Cage. Where else, or during what other epidemic, in the United States can such evidence of the heroism and self sacrificing spirit of the medical profession be found? The death rate may be compared to that of the great epidemic of 1793 in Philadelphia, where in a population of 40,000 there were 4004 deaths, while in Memphis in 1878, out of a population, remaining in the city, of about 17,348, there were 5,500 deaths. The epidemic of 1878 should go down in history as the most malignant, widespread and fatal, that ever visited the United States. Its history has never been fully written, and there is expressed by some writers an underestimation of the fatality. Even Osler in his "Practice of Medicine" classed this epidemic as of "moderate severity." What an error! It is true the doctors at that time were not accustomed to making a diagnosis of yellow fever, unless the symptoms were unmistakable, as albuminuria, marked jaundice, black vomit, and suppression of urine. There were no doubt many mild cases overlooked, and the death rate should have been correspondingly lower. But, I cannot recall any such mild cases as I saw in subsequent years. It seems to me that all the patients of 1878 were much sicker than any I saw in 1897, 98 and 99. The insanitary condition of the towns at that time must have been a factor in the death rate, for there were no sewerage systems in the smaller towns, no piped water, no sanitary toilets, and no screened houses. Extreme dread, panic and terror in my judgment, were determining causes of death in many instances. The doctors, with few exceptions, knew nothing about the treatment of the disease. Many of them gave calomel and quinine, to begin with, just as if they were treating a case of malaria, and had the patient covered with blankets, and profusely sweated. All kinds of liquors, ale, beer, Dublin stout, whiskey, and champagne were sent in by the Howard Association, and freely used in the treatment of the disease. Champagne, especially, was thought to be good after the decline of temperature, and being much used, increased the death rate. The practice of overdosing and oversweating must have been the cause of fatality in many cases. So when all of these causes are considered it is questionable whether the type of fever of 1878 was really more malignant than that of 1897, 98 and 99. My opinion is that it was. We have learned much about mild cases, and how to diagnose them, and have found out that oftentimes people may have yellow fever, and become immunized without being much sick, and this is true especially of children and negroes. In fact, many "walking cases" occurred in recent epidemics.

I have been greatly impressed by a consideration of the wonderful improvement in the treatment and management of yellow fever of recent years, compared with that of 1878. In this connection, I wish to pay a tribute of respect and regard to Dr. R. D. Murray, of the United States Marine Hospital Service whom I first met at Ocean Springs, Miss. in 1897. He taught me more about the management and treatment of patients with yellow fever than I had ever before known, and convinced me of his great ability. I remember what stress he laid on the use of normal salt solutions as enemas to control nearly all the symptoms of yellow fever, excepting of course those caused by unusually malignant conditions, or organic disease. He used the solution to quiet nervousness, relieve delirium, to lower temperature, to promote perspiration, to stimulate the action of the kidneys, to move the bowels, and in short it was his favorite remedy, and I found it most useful in my own practice.

At the close of this epidemic, I was presented by the citizens of Water Valley with $350.00 and a handsome gold watch. With the money, I repaid my oldest brother the amount I had borrowed from him for expenses for my second term of lectures in Philadelphia. The watch I still hold as the most appreciated trophy of my professional life. The citizens took great interest in me, in fact, I was generally lionized, and my practice was soon very materially increased. I shall never forget my friends in Water Valley who were so good to me in the struggles of my early professional life. To this day, I hold them in fond remembrance. They were friends to me when I needed friends, and shall never be forgotten.

I was soon elected Health Officer of Yalobusha County of which Water Valley is the county seat, of the northern part of the county, and Coffeeville, the county seat of the lower part. I joined the State Medical Association and was selected for the state at large, a member of the State Board of Health. The State Board of Health at this ime consisted of thirteen members, one from each of eight congressional districts, appointed by the Governor on his own volition, and five from the state at large, appointed on recommendation by the State Medical Association. The recommendation I received for three successive terms of four years each, a compliment for which I have always been deeply grateful. My first appointment came from Governor J. M. Stone, my second from Governor A. J. McLaurin, and my third from Governor A. H. Longino.

There was no yellow fever in Mississippi of any consequence in 1879, although there were 2010 cases with 587 deaths in Memphis. This was the year of the organization of the National Board of Health, whose members were appointed by the President of the United States. Dr. E. W. Mitchell, of Memphis, received the appointment and was a prominent, active, and most useful member. In closing my reminiscenses of 1878, I wish to say that the doctors who volunteered their services and gave their lives for the sake of others, as did young Doctor Menees, of Nashville, who went to Memphis and fell victim to the disease, like many others who likewise lost their lives, should be forever beloved and remembered by a grateful people. The soldier who dies on the field of battle is honored as a hero and his family is cared for and pensioned by a grateful people, and a generous and considerate government. All honor to the soldier. But who now remembers the doctors the heroes of 1878 whose graves, hundreds of them, are neglected mounds, scattered in many states? They lie "unwept and unsung" and yet they displayed a type of heroism and a degree of moral courage greater and sublimer than that of the soldier who goes into battle accompanied by the blare of trumpets, the rattle of drums, martial music and all the "pomp and circumstance of war." Many do not know why they are fighting or for what they are fighting. The doctor fully aware of the peril, voluntarily and without any urging goes into a greater danger oftentimes, alone in the silent hours of the night, knowing that if he is stricken, his chances of recovery are less than if he were in the ranks of the army, and if he dies no pension will be provided for his family. "Greater love hath no man than this, that a man lay down his life for his friends."

III

1888

Following the trying years of 1878 and '79, Mississippi was free of yellow fever until 1888 and then only fourteen cases, with seven deaths, occurred in Jackson. The infection was said to have been brought from Jacksonville, Florida. The cases were near the railroad station and fortunately a diagnosis was made early and a development from these prevented, but the state was thrown into the wildest excitement and many of the towns and railroads immediately quarantined. A very suspicious case was announced at Coffeeville, thirteen miles south of Water Valley, and, as I was the health officer of the county, I was called upon by the doctors to come down and decide the question, but Capt. W. A. Herring who was Mayor of Water Valley at that time, a very nervous man, and terribly afraid of yellow fever, said that if I went to Coffeeville he would not permit my return to Water Valley. I told him that since I was health officer, it was my duty to go, and that I would go, whereupon he said he would put out guards and not permit my return. I carried along an extra suit of clothes, and changed my coat and trousers before entering Coffeeville. I found the patient had died, but from the examination of the body and the history given by the attending physicians, I made up my mind that it was not yellow fever. I wired Capt. Herring to that effect and returned home passing guards on the road just before entering town. They did not undertake to stop me. Capt. Herring was not at all pleased with my action and made much light of the telegram that I had sent him, which I found tacked on the drug store door, with the following comment, written by him. "Which boiled down, I suppose means, no yellow fever." I was very happy that no other cases developed from the patient at Coffeeville, and readily forgave the Captain for treating me with slight discourtesy. I could tell some interesting anecdotes about the good old Captain, but my paper is long enough, except that I must tell that I was married February 8th, 1888, to Miss Mary Lou Rainey, daughter of W. S. Rainey and wife, Mary Minter Rainey, of Columbia, Tennessee, who still abides with me. She is an ideal doctor's wife, faithful, loving, devoted and self-sacrificing. We have two fine sons, Albert Mintor Gant, Knoxville, Tennessee and Richard Preston Gant, Columbia, Tennessee.

This brings me without any important episodes, except those common to an active small town and country practitioner of medicine, to the year 1897, the beginning of my really active service, in efforts to control the spread of yellow fever in Mississippi. But that is for another chapter.

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This is a likeness of the able and affable Dr. Oscar J. T. Johnston of Batesville, Arkansas, President-elect of the Arknsas Medical Association. He is worthy and well qualified in every respect. He is able in leadership. Dr. Johnston took his medical degree at the University of Nashville, 1907. He served in the World War as Captain in Medical Corps for eleven months, was attached to Base Hospital number ninety seven and had eight months foreign service. He is surgeon in charge of the Johnston-Craig Hospital, Batesville Arkansas. The State Association of Arkansas will go forward under his direction.

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THE MISSISSIPPI DOCTOR

The Journal with a vision, the delivery of modern medicine to the masses at less cost to the individual and more profit to the practitioner. The champion the small hospital, the hub around which this service must be built.

W. H. ANDERSON, M.D., *Editor and Mgr.*
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The next meeting of the Miss. State Association will be held in Meridian. Meridian is really an outstanding medical center. It is well supplied with hospitals. Its doctors rank high in efficiency. It is quite well supplied with hotels. The city is accessible by rail and road. The profession are liberal entertainers. Make your plans now to attend. We do not have one-half the number attending the state associations that we should have. We will not make the progress we might as long as this is true.

Dr. Isadore Cohn. Professor of Surgery of Tulane, is spending several months in Europe visiting clinics and making observations in surgical progress of the old world. He had promised to summarize these observations, some of them, at least for The Mississippi Doctor. No one can do it better. His "Ward Rounds" are ready eagerly and with much profit. We appreciate his cooperation with us in giving our readers the best and the latest in authentic medicine and surgery.

The machine age is multiplying the amount of plastic surgery in this country. The interest of the insurance companies in the injured is demanding the very best surgery in this field. The June meeting of the North East Miss. 13 County Medical Society was held at Columbus. Every essayist was present with a paper. It was one of the best scientific programs the society ever had. President Dorsey presided with ease and efficiency. Dr. Willis Campbell, of Memphis. a native of Mississippi, was the visiting essayist. His discourse on fractures was unusually good. He discussed the general principles underlying the handling and the healing of fractures, and made most helpful practical applications. The society voted him a rising vote of thanks. Dr. Ike Knox, of Vicksburg, was the exchange essayist. He read a most helpful paper on pelvic tumors. Drs. Gamble and Wilson, of Greenville, were appreciated visitors. Dr. Gamble gave a very able discussion of Dr. Philpot's paper on reducing the death rate in abdominal surgery. The meeting was held at the Gilmore Hotel. Everything was comfortable and convenient. The banquet was served on the patio of the hotel. It was an unusually nice banquet in every respect. Dr. Hunter Scales presided as toast master and his talent and art in the chair was evident throughout the meeting. Many were called upon for short talks. Dr. W. C. Walker, of Houlka, was the most eloquent orator as usual when he has a chance to compete.

The doctors of Columbus certainly gave us a cordial hand, a heart welcome, and most comfortable and conveniently planned meetiing. We will look forward with pleasure to a return to Columbus.

Governor White has appointed on the hospital commission: Drs. J. Gould Gardner, Columbia, J. Rice Williams, of Hosuton, E. R. Nobles, of Rosedale, and Hon. Tom Bailey. They are now at work putting things in form. This is a good committee. Give them all the aid you can. The distribution of funds for the indigent sick on a percapita basis is a big step forward. It should be a big success. The commission has a big responsibility upon it. The general practitioner, the doctor refering the case to the hospital, is the most important cog in the wheel of success. This amount of funds will not take care of all the indigent sick by any means. The emergency cases where the life is at stake should have precedence. The case should be a worthy one, should deserve state aid. Let the commission, the trustees, the hospitals and the practitioner join hands for the good of the indigent who are in desperate need.

A post graduate course in pediatrics is now in progress at Clarksdale with Dr. Robert A. Strong in charge. This will be a wonderfully fine course. Dr. Strong knows how to present the facts in a lecture and he is very practical in application. He will help the local men solve their problems in pediatrics. The time is propitious for the courses. The intensive course will prove popular we think. The bringing of post graduate work to the busy practicioner is a great step forward. It will teach the local men to be more keen observers. It will enable the specialist to come in contact with the small town practitioner and in turn make him more practical in his teachings. It serves this double purpose of raising the standard of efficiency of the general man, the practitioner and the pediatrician out on the firing lines of practice and it will sooner or later reflect in more practical teaching in our medical schools. Mississippi is very fortunate. We congratulate the physicians of Clarksdale and Coahoma county on securing this course and on being fortunate enough to have it taught by Dr. Strong.

The machine age in which we are living is increasing the number of indigent sick it would seem. Public funds will be needed more and more to aid in their care. And this need not worry us so much as long as the state does not compel a man to go to a certain physician or a certain hospital. The beauty about the present bill providing for funds for the indigent sick, the patient is left free to go to any hospital he chooses except in the zoned area around the state charity hospitals. Leaving the patient free to select his hospital and his doctor is the heart and soul of the new plan.

In this issue you will read with much interest the first chapters of the actual doings of yellow fever in the early days. Your heart will be grateful to Dr. Gant for this fine piece of work. It called for plenty of work on his part. If you would be interested in having this in pamphlet or book form when the chapters are all in, drop him a line, or the editor.

With just a little expense the country practitioner can do much good gynecology in his office. He can cure minor ailments, help to prevent more serious ones, and discover cancer in its early state when it might be cured by operation or radium. Gynecology in the small town and rural community is a much neglected field.

If you have a vision for service invest your money in your office instead of the stock market. It will bring you better dividends as a rule.

Marion Milton Underwood, age seventy-seven and a long time resident of the Delta, passed to his reward a few weeks ago. He was the father of Dr. Felix J. Underwood, one of the most efficient public health officers in the United States. Mr. Underwood was born in Marion County, Alabama, and in early life moved to Monroe County. He lived at Holly Springs and at Clarksdale, but at the time of his death he had returned to his first love, the farm, and was living in Talahatchie county. He leaves his wife and eight children. He was one of the sturdy and dependable types of citizen that always did his part in building and sustaining a country. General Gorgas lived in Alabama. Dr. Felix J. Underwood came very near being a native of Alabama. Had Dr. Underwood been made Surgeon General of the Public Health department, he would have been another Gorgas in efficiency.

It will soon be time to make your plans to attend the Southern Medical Association which meets in Baltimore in November. It will do you good to breathe the medical atmosphere of this outstanding city of learning for a few days. The scientific program will be good. Mr. Laranz does not leave out any good thing in planning a program.

Everything else being equal trade with the companies advertising in The Mississippi Doctor. You will not lose by it. It will be a great help to us in financing the journal. We think you are due this much consideration.

We deeply appreciate the announcement of the Dr. Edwin W. Cocke Sanatorium and Clinic in our journal. It is located ten miles East of Memphis. It is an institution for the treatment of mental and nervous disease. We thank you, Dr. Cocke.

We appreciate the courtesy cards from the doctors. It is a nice convenience and the spirit that prompts them is good. We thank you.

The Southern Railway Surgeons will meet in Jacksonville, Florida next year. The meetings are always good. The trip will be delightful.

One of the hard things to discover in the field of medicine is an imperative indication for whiskey.

The American Medical Association will hold its next annual session at Atlantic City, which is a most delightful meeting place.

Read the programs for the postgraduate courses. You will be interested.

In the United States with six and a half million on relief according to Dr. W. O. Baird, of Henderson, Tenn., only fifty physicians and surgeons were on, while there were one thousand lawyers, three thousand ministers and twenty thousand teachers. But why shouldn't a doctor make a mere living working seven days in the week and nights also?

It seems to take about ten to fifteen years for a discovery in medicine or surgery to sift down to the practitioner and be used generally. If this be true, it is too long. The teachings in our medical schools need to be more practical, the efficiency of the general practitioner needs to be raised and his equipment added to.

Four dollars and twenty-two cents is the average price per day for hospital cost in the United States, four dollars and two cents in Mississippi. Many hotels have more than this and no nursing or meals furnished.

We continue to hear compliments of the postgraduate course in obstetrics by Dr. Lapham through the state.

April the 9th, 1907 might well be designated as the beginning of the new era ("the new deal") in organized medicine in Mississippi; for that was the opening day of the historic "Gulfport session." The scientific program of that session was a good one. Many visitors of prominence and renown were present and took part either in the presentation or discussion of papers. One striking feature of the program, when compared with the programs of the present, is that so many papers were read by out-of-state men. About fifteen were from New Orleans. A few from Memphis and Mobile. One from Hot Springs, Arkansas. Thus it will be seen that more than half of the program was furnished by men from other states. These papers were read by men who were recognized at home and abroad as men of outstanding ability. Hence they added much to the standard of the program. Very few of our men, especially of the younger class, took any active part in scientific phase of the work done. How different the situation today. Today many of the best papers presented at our annual meetings are read by our own young men. This shows that we have talent of our own and that this talent is being developed and recognized. Dr. W. W. Crawford was our presiding officer at this meeting and as might be expected, his presidential address was scholarly, timely, and interesting. Many of his suggestions as to the needs for the advancement of the cause of organized medicine in the state as well as for the interests of the public, have been adopted and put into effect. At that time no qualifying requirements were demanded of applicants for license to practice medicine, except that they pass a satisfactory examination. Just what was implied or meant by "satisfactory" was vague and indefinite. Hence hundreds of men with no basic or medical education were crowding into the profession and were passing "satisfactory" examinations, either in person or by proxy. Evidently something had to be done about it. At this meeting the Association issued its mandate that it be done. So I repeat the statement that the new era of medical practice had its beginning at this meeting.

Another matter of great importance to both the doctors in the state and to the interests of those holding or buying life insurance was considered and passed upon in no uncertain or indefinite way. This was the question of fees to be paid to doctors making examination of applicants for insurance. A resolution was adopted that no member of the Association should make such examination for less than the standard fee of five dollars. It required several years to adjust this matter, but finally every standard and reputable company doing business in the state was forced into line. This could have been done more promptly and easily had all doctors been more cooperative than some of them were. Many of the men who held commissions as examiners lost their connections and incidently, much money by faithfully adhering to the spirit of the resolution, while other men less true to interests of the profession as a whole reaped large benefits. In some instances a doctor would travel from place to place with the agents and make examinations where ever applicants could be signed up. But soon the companies discovered that it was better business to use only high type reputable doctors as examiners and the only way to get the service of such doctors was to pay standard fees. When the Association shall meet again, three decades of time will have slipped by since the Gulfport session. It is very gratifying to consider the advances in medicine and surgery during these years. Many very startling discoveries and achievements have come about. Some of these, perhaps, by accident but most of them as the result of hard work and close study. There has, too, been foisted upon the profession and the world, much spectacular and clap-trap stuff that serves only to confuse and bewilder. When all this shall have been properly evaluated, as it will be, I fear the faith of the public in medicine and medical men will be disturbed if not shaken. So it behooves us all to think, study and observe as we go our way. Let us not be like "dumb driven cattle," submitting to the edicts, as it were, of a few men who set themselves up as authorities and accepting their pronouncements as infalible. But let us not be slothful, but rather let us be very alert and be sure to keep abreast of modern thought and investigation. There is so much yet to do and discover that what has been achieved in the past seems pitifully insignificant. So long as pneumonia remains unconquered, cancer unsolved, both as to nature and etiology, essential hypertension as unknown quantity, no man worthy the title of doctor of medicine, should be content to rest on his honors of float with the tide. Doctors are like fish—the live ones go up stream, the dead ones float down. Are we dead fish or live ones?

G. S. B.

By invitation of O. H. Williams, of Savannah, and others we attended the joint meeting of the counties of Alcorn and Tishomingo, in Mississippi, Hardin, Lawrence, Lewis, Perry and Wayne (the five counties) Madison and McNairy, and the Tri-County Medical Society, Chester, Decatur and Henderson, on Tuesday, June 30. Dr. W. E. Boyce, of Flatwoods, Tenn., was the courteous president and Dr. Williams, the efficient secretary. This joint meeting at Shiloh Park is always good. The fellowship is very fine. One of the great battles of the world was fought at Shiloh, the last one to be fought face to face without breast works or any protection, one from the other. The park is very beautiful. The pavillion is a nice and a comfortable place to hold a meeting. Drs. Lucious McGhee and R. L. Sanders, of Memphis, were guests. Dr. Jere Crook, of Jackson, Tenn., favored the meeting with his genial presence and words of wisdom. You will read with interest some of the papers read at this meeting. The program follows:

MORNING SESSION

Invocation—Rev. B. J. Duncan, Savannah, Tenn.

Address of Welcome—Superintendent of Park.

Response—Dr. J. R. Hill, Corinth, Miss.

"Acute Hemorrhagic Nephritis in Children, by Dr. L. B. Brackstone, Iuka, Miss. Discussion: Dr. Henry Sanders, Selmer, Tenn., and Dr. T. J. Stockard, Lawrenceburg, Tenn.

"Intestinal Obstruction," by Dr. John H. Tilley, Lawrenceburg, Tenn. Discussion: Dr. Charles F. Webb, Jackson, Tenn., and Dr. M. H. McRea, Corinth, Miss.

"Prenatal Care and Some Pathological Conditions in Obstetrics," by Dr. J. E. Pearce, Jackson, Tenn. Discussion: Dr. A. E. Bostick, Iuka, Miss., and Dr. D. L. Woods, Waynesboro, Tenn.

AFTERNOON SESSION

"Sudden Deaths," by Dr. W. O. Baird, Henderson, Tenn. Discussion: Dr. W. E. Boyce, Flatwoods, Tenn., and Dr. J. W. McClaren, Jackson, Tenn.

"Skull Fractures With Brain Injuries," by Dr. C. F. Gilbert, Corinth. Miss. Discussion: Dr. Jere L. Crook, Jackson, Tenn., and Dr. L. C. Smith, Henderson, Tenn.

"Public Health Problems Confronting the General Practitioner," by Dr. Ernest Smith, Bethel Springs, Tenn. Discussion: Dr. J. W. Irwin, Savannah, Tenn., and Dr. T. A. McAmis, Lawrenceburg, Tenn.

The Failing Heart In Middle Age*

J. P. WIGGINS, M.D.
Cleveland, Miss.

Reviewing this subject from a retrospective angle it is strange that a misnomer like chronic myocarditis should have withstood so long, and remain so firmly entrenched in the face of the rapid progress of scientific medicine. General dissatisfaction with this term has long been subconsciously voiced by many authors in the last decade and the term employed with an apologetic gesture. With the boundaries of cardiovascular pathology continually widening it was inevitable that a term formerly sufficient to encompass the entire subject should sooner or later be stretched to the breaking point. With a fuller appreciation of the degenerative changes normally present in every individual reaching the half way mark of his allotted span of life the true diseases of the heart and blood vessels stand out in sharp contrast. The dlifferentiation between the wearing out process and the alterations affected by disease becomes a special problem for the clinician of this period.

No problem so intimately associated with the life and activities of every individual of modern society can fail to develop opposing schools of thought. Adherents to various theories sooner or later swing the pendulum from one side to the other. In no place is this more true than in the consideration of the cardiovascular diseases seen after the age of forty.

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*Read before the Delta Medical Society, Cleveland, Miss., April 8, 1936.

At times the pendulum seems to be grasped by those who would hold the electrocardiograph and similar scientific procedures as a sort of fetish to be worshiped at the shrine of science. They are however, no more to be censured than those who still maintain the totality of observation and experience alone. It is true that in a rapidly changing scientific order the physician may stand at a loss in evaluating the many laboratory and physiological procedures, it is also true that the successful physician cannot dismiss summarily each new suggestion merely because it is recent. In the approach to the proper understanding of the changes wrought by the aging process, one must make use of every available source of scientific investigation. Within the clinical manifestation of the ageing process will be certain well defined entities, which at times may be diagnosed from a single fact. A patient with angina pectoris may for example present nothing more to the examiner than the fact that he has suffered the pain so characteristic of this dreadful malady. In such a case the diagnosis may be made exclusively from the history. On the other hand, an individual without symptoms of any kind may present himself for a periodic health examination at which time the only findings may be certain alterations in the electrocardiogram. Nothing less than a complete cardiovascular survey should be made on every individual over the age of forty before rendering an opinion.

A cardiovascular survey embodies not only the usual physical examination of the entire body, but also includes electrocardiographic and polygraphic studies, X-ray and fluroscopic examination, vital capacity estimations, blood pressure and oscillometric readings, ergometric tests and all laboratory procedures. With the knowledge of heart disease founded on the presence or absence of murmurs or irregularities of the pulse the busy practitioner soon learned that this yard stick of knowledge was not sufficient. Having measured this man by the older standards and having assured him that his heart and blood vessels were normal, it becomes rather disconcerting to explain to the family the man's sudden death on his way home. Let us now turn our attention to the particular condition seen in middle and advancing years, which has for some years masqueraded under the term chronic myocarditis.

Myocardosis, instead of being a disease seen in the early decades of life is seldom seen before the age of forty. Instead of being the result of definite inflammatory changes this condition affects those who have previously enjoyed active and vigorous lives. It may develop gradually and have an insidious origin or may occur abruptly. Men are more prone to this condition than women during the fourth decade, but as the sixth and seventh are approached, both are equally affected. The striking features are those of subjective reaction and are far out of proportion to the actual physical finding.

The terrific sternocardial pains, the dyspnea, the peculiar depressive psycologic symptoms of the disease all referable to the heart and chest may be compared in striking contra-distinction to the absence of the above symptoms in chronic myocarditis. Myocarditis, a disease of earlier life, exhibits extreme weakness, patient tires easily, accompanied by slight temperature, rate and rhythm disturbed. We have all seen the post influenzal bradycardia. On the other hand we have seen that marked tachycardia met with in acute rheumatic and scarlet fever. So gradual may be the onset of symptoms in myocardosis depending on the failing heart that only the closest questioning and scrutiny of the individual will bring out or demonstrate their presence or absence.

Epigastric distress without frank pain, a sense of fullness on rising from the dinner table, mild insomnia, increasing fatiguability is the most common and early manifestation of myocardosis. It may be from physical or mental effort. There is a sense of inability to perform certain physical tasks even before they are attempted. So common and constant has this symptom been elicited that Hyman has given it the term ergophobia. Some authors have given this symptom as a loss of ambition. It is more of a subconscious fear than a disinclination.

According to Sir James McKenzie, heart failure may be defined as that condition in which the heart is unable to maintain an efficient circulation during the efforts necessary for the daily life of the individual. This definition obviously includes cases of advanced failure as well as those in which the failure is just beginning, and it is important to note that an adequate circulation can be maintained by a heart with considerable structural damage. It is needful to insist upon this point, as the absence of a clear conception of what heart failure means has led to the magnifying of certain obvious signs, such as murmurs, or arrhythmias, which are actually not important when considered from the standpoint of an efficient circulation. Heart failure may be acute or chronic. We have much to learn about acute heart failure. When we say that a patient dies with pneumonia, typhoid fever, influenza or septicemia, or following an operation and say that he died because his heart failed, we are making a simple statement. However, when we begin to analyze what has happened the problem is far from simple.

Valuable signs of acute heart failure are rapid dilation of the heart, breathlessness, engorgement of the veins and the development of congestive phenomena. However, heart failure is possible without any of those. There may be only enfeeblement, and perhaps, even slowing of the heart beat. The symptoms of this type are mainly cerebral—due to insufficient blood supply.

The signs and symptoms of chronic heart failure afford a familiar clinical picture. The immediate outcome of the failure of the heart muscle is poor peripheral circulation, the evidence of which is manifest in the organs and tissues of the body, according as these parts are supplied by the laboring heart. If the left ventricle is affected, the result is improper functioning of the systemic arterial system with anemia of the tissues. If the left auricle is effected, there is edema of the lungs and cyanosis—due to stasis in the pulmonary vessels. If the right auricle and ventricle are involved, there are cyanosis, generalized edema and portal stasis. In a severe type of failure there may be a summation of all these symptoms.

Any clinical classification of heart failure cases is manifestly difficult and not entirely satisfactory. Most textbooks discuss only two types, the congestive and the anginoid. However, the practitioner confronts cases in which certain clinical features predominate and a brief discussion of certain clinical types would seem proper. Dr. Cross, of Brooklyn, advances the following clinical classification which offers a fair approach to the clinical side of the question:

1. Symptomatic type, without edema or fibrilation.
2. Congestive failure type:
    a. Usual type with edema ,rapid pulse, and often fibrillation.
    b. Chronic edematous type, with slow pulse, fibrillation either present or absent.
3. Hypertensive type, complicated with nephritis or artero-schlerosis.
4. Type secondary to thyrotoxicosis.
5. Anginoid type.
6. Digitalis proof type.

1. Symptomatic type without edema or fibrillation—This is the type most often missed, and the practitioner should be constantly on the alert for such cases. They often go undiagnosed, for they are slow to consult the physician. The symptoms are few and the findings on physical examination are practically negative. Early fatigue and slight dyspnea in accomplishing acts that the patient could formerly perform with comfort are the chief symptoms. There may be slight to moderate increase in the pulse rate and occasionally there is a slight hacking cough. A few minutes rest causes quick disappearance of the symptoms.

The physical examination usually reveals nothing definite. The heart sounds are not vigorous, there is no arrhythmia, no murmur is usually present and no evidence of pulmonary, hepatic or peripheral stasis. The blood pressure is usually within normal limits, or may be low. The apex beat may be slightly outside its normal limits, but, as the patients are often in the fifth decade of life, this in itself is not significant. If the patient is asked to take moderate exercise, the pulse may be slow to return to normal. The electrocardiogram may reveal preponderance of the ventricle or the height of the amplitude may be restricted. The history, then, consisting chiefly of moderate dyspnea on exertion is probably the chief thing to direct our attention to the heart and we should be constantly on the alert for this type of case, for, if detected early, proper therapy and restriction of activity offers much in prolonging life and putting off the development of more serious symptoms.

2. Congestive failure type—a. This is the usual type, characterized by dyspnea, edema of the extremities, moisture at the lung basis, and rapid and often irregular heart action. However, there are certain early cases with congestive phenomena, which may be confusing. Coughing. wheezing, respiration and haemoptysis may suggest pulmonary rather than cardiac disease. Mitral stenosis has been confused with pulmonary tuberculosis, and many cases of asthma are cardiac rather than bronchial. Jaundice and a tender liver with upper right quadrant pain due to heart disease may be considered to be due to the gall bladder. A careful physical examination, however, will remove all doubt as to the condition, for the enlarged heart, the presence of valvular defects, the altered balance of the heart sound, arrhythmia, the discovery of an enlarged liver, the presence of ascites or pleural transudates, all point to the cardiac origin of the symptoms.

b. Chronic edematous type: There is a type with chronic edema and slow pulse rate, which runs a rather protracted course. They may improve from time to time, but the edema is never entirely lost. I recall one patient of this type who, when I first saw him, had had chronic edema of his lower extremities for three years and though he suffered moderate dyspnea on exertion all the time, had been fairly actively engaged as a yard foreman in a lumber yard. The edema would subside at night and over the week-end, but would never entirely disappear. He was fairly active for two more years before succumbing to a coronary accident.

3. Hypertensive type, complicated with nephritis or arterio-schlerosis: The cause of this type is elevation of the blood pressure, and the patient is usually, but not always, over forty years of age. In this group the symptoms are

first purely subjective, but gradually increase in severity. Slight dyspnea on exertion and crepitations at the lung bases on inspiration may be the only signs. The oustanding characteristic ssymptom of this type is an attack of noctural dyspnea. The patient is awakened from sleep gasping for breath and coughing up large quantities of pink frothy sputum. The pulse is weak and rapid, the color is ashy, and the extremities cold and clammy. Death seems inevitable, but within twenty or forty minutes, especially if morphine and atropine are given, the attack usually subsides. Physical examination of these cases shows considerable dilation, as well as hypertrophy, as manifest by physical examination and X-ray. The blood pressure is high and there is usually evidence of nephritis or arterioschlerosis. The cases of so-called paroxysmal pulmonary edema and cardiac asthma should fall in this group. Under this group it is well to note that a sudden drop in blood pressure indicates impending failure. I recall one patient with hypertensive heart disease whom I had observed for two years. He complained of dizziness and pain in chest, and, on examination, revealed a pressure which ranged as a rule around 200 systolic, but had dropped to 140. There was no increase in the pulse rate and no evidence of crepitations in the chest. Thirty-six hours later he developed acute congestive failure with pulmonary edema and died within three hours.

4. Type secondary to thyrotoxicosis—There are no characteristic symptoms of thyrotoxic heart disease. The early cardiovascular symptoms of thyrotoxicosis itself are due to tachycardia and effort syndrome. They are chiefly dyspnea and palpitation and occasionally heart ache. If failure or auricular fibrillation supervenes these symptoms increase.

Increased heart action both in rate and force is the most common cardiovascular sign in thyrotoxicosis. Enlargement of the heart, arhythmia and congestive failure. when they occur, manifest themselves in the usual way. In almost 80 per cent of cases of thyrotoxicosis the heart rhythm is normal and the pulse rate is fast, averaging from 100 to 120 per minute at rest. Rare cases may have a normal or only slightly elevated rate. The remaining 20 per cent have a disturbed rhythm—almost invariably auricular fibrillation. The systolic blood pressure is usually somewhat elevated in thyrotoxicosis, while the diastolic pressure remains at a normal or somewhat decreased level. Thus the pulse pressure is usually increased. The important point in this group is to recognize the thyrotoxicosis. Prompt institution of therapy for this condition prevents the development of cardiac damage, and in cases where advanced damage has occurred proper therapy is often followed by most gratifying results.

5. Anginoid type—This type of failure is a most important one, and one which has without doubt sharply increased in the past decade. Precordial or retrosternal pain or distress, often radiating into the shoulder, the arm, the neck, or the lips, is the outstanding symptom. The sensations may vary from a slight feeling of fullness or distress to a pain of terrible intensity, with a sense of impending death or death itself. Physical exertion or emotional stress is the activating influence in producing the pain. These symptoms may be associated with aortitis, either syphilitic or arterio-schlerotic, but it is essential to remember that severe symptoms and death may occur with no demonstrable signs of heart disease. Exercise is the acid text, and increasing sensitiveness to exertion, be it muscular or psychic as its chief characteristic. We must constantly be on the alert for the early cases and go carefully into the history of all precordial pain. "Pseudo-angina pectoris" is an unfortunate term and deserves to be discarded. Nearly every case of heart cramp is real and not functional.

In this group fall the cases of coronary thrombosis. The chief symptom is severe, agonizing, almost uncontrollable pain. The distribution is much the same as in angina pectoris, though at times its distribution may suggest abdominal crisis. The signs are weak and barely palpable pulse, enfeebled heart sound, marked fall in the blood pressure, slight fever, leucocytosis and development of a pericardial friction rub. The electrocardiographic signs are usually characteristic.

6. Digitalis resistant type—This type is added for reason of the fact that, clinically, the cases falling into this group present one of the greatest problems in cardiology. These cases must have another factor besides decompensation, possible reinfection of the endocardium, or the presence of unsuspected disease elsewhere in the body. Splenic enlargement is often present, suggesting bacterial activity. The pulse continues rapid in spite of digitalis, and it is this rapidity of the pulse that differentiates them from the chronic edematous type with slow pulse.

A very brief general discussion of the symptoms and signs of heart failure has been presented. An attempt to classify and discuss certain clinical types has been made. The essential point to be made is that early recognition of these signs and symptoms before marked cardiac damage has occurred offers the best means of instituting therapy that may prove beneficial.

In 1900 death rate in U. S. A. was 132 per hundred thousand.

In 1932 the mortality rate was 224 per hundred thousand showing an increase of 70 per cent.

Ovarian Tumors*

I. C. KNOX, M.D., F.A.C.S.
Vicksburg, Miss.

The entire subject of ovarian tumors has been to the profession in general and to the author in particular, an exceedingly interesting one. The ovary is possessed of so many complex secretory functions, both activating and inhibiting, that this organ is a never ending source of interest and speculation, and particularly are these remarks pertinent to ovarian neoplasms. The origin of these tumors is the source of considerable speculation and there has been a striking lack of unanimity of opinion on the part of various authors concerning their origin. It is true here as elsewhere, that one cannot, from a single microscopic examination, say positively that an ovarian tumor is malignant or benign. The positive finding of malignancy is naturally diagnostic, but many sections must be cut and many areas must be examined before one can say with confidence that malignancy does not exist.

Kolliker believes that ovarian neoplasms arise from the remnants of the wolffian ducts. The earlier writers maintain that they were simple accummulations of colloidal degenerations about the affected tissue of the ovary. Klebs and Waldyer felt that new growths of this tissue could arise only from epithelial cells that had taken on pathological expressions. The question as to what cells ovarian tumors must originate from has been the subject of much controversy. Gudahl believes that the ovary is the seat frequently of tumor because it is the center of such activity coupled with great physiologic change and instability. It is unnecessary to proceed further with this train of thought. Those interested in this aspect of the subject are referred to the several excellent articles of these authors and to the voluminous literature that has accumulated.

The classification of neoplasms of the ovary has been and is exceedingly unsatisfactory. Blair Bell, before the British Congress of Obstetrics and Gynecology, offered an interesting and elaborate classification, briefly dividing such growths into those of intrinsic and extrinsic origin. The classification of this author, while certainly far from ideal and unquestionably in certain instances vulnerable to attack, is, I think, of sufficient importance briefly to review it.

NEOPLASMS OF THE OVARY OF INTRINSIC ORIGIN

A. From normal functional tissues:
  1. Lepidomata
    (a) Capsular mesothelium
      Surface adenomata .... Innocent
    (b) Granulosa cells .... Malignant
      Innocent
    (c) Lutein cells .... Malignant
      Innocent
    (d) Interstitial cells .... Malignant
    (e) Endothelioma and (?) Innocent
      Perithelioma .... Malignant
  2. From connective tissues:
    (a) Innocent:
      Fibroma
      Myoma
      Myofibroma
      Chondroma
      Osteoma
      Lipoma
    (b) Malignant:
      Sarcoma
        Mixed-cell
        Round-cell
        Spindle-cell
        Specialized-cell
        Rhabdomyosarcoma, etc

B. From developmental relics: lipidomata
  1. Adenomata
      Innocent
    (a) Solid .... Malignant
    (b) Pseudomucinous
      cystadenoma .... Innocent
    (c) Serous cystadenoma .... Innocent
    (d) Thyroma .... Innocent
      Innocent
  2. Papillary adenoma .... Malignant
  3. "Testicular adenoma"
    (Ovitestis) .... Innocent

C. From sex-cells: teratomata
  1. Innocent cystic
  2. Malignant solid
  3. (?) Neuroma
  4. Thvroma

OF EXTRINSIC ORIGIN:

A. Developmental inclusions:
  (a) (?)Suparenal
  (b) Endometrioma

B. Invasion from without:
  (a) Chorionepithelioma
  (b) Endometrioma
  (c) Carcinoma

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*Read by Invitation before the Northeast Mississippi Thirteen County Medical Society, Columbus, Miss., June 16, 1936.

*From the Dept. of Gynecology, Vicksburg Clinic, Vicksburg, Miss.

(d) Sarcoma
(e) Experimental implantation.

C. Metastases secondary to:
(a) Mammary carcinoma
(b) Gastro-intestinal carcinoma
(1) "Krukenberg' type from stomach
(2) Adenocarcinoma from bowel or stomach
(c) Uterine carcinoma
(1) Cervix uteri
Angioma
(2) Corpus uteri
(d) Thyroid carcinoma
(e) Carcinoma elsewhere
(f) Melanomata

We are interested from a practical standpoint in determining what symptoms would lead one to suspect that neoplasm of the ovary did exist. Here, as elsewhere the great witness is pain. Pain is the principle symptom of ovarian neoplasm. In the small follicular cyst the discomfort is not great. If twisting of the cyst upon its pedicle occurs, the usual evidence of an acute abdominal disaster will be present. If the tumor is massive in size, there not only will be pain, but as a result of presure, there is apt to be backache, and there may be irregularity of menstruation. The imperfect or complete lack of development of the corpus lutea may provoke vague symptoms simulating the above. It is not unusual in these cases for the menstrual cycle to be disturbed, becoming either irregular or unduly prolonged and occasionally these patients will menstruate several times within one month. The cystic type of ovarian disease may be seen at any age, from infancy until the menopause is reached. The occurrence of pregnancy will frequently cause temporary cessation of the symptoms.

Sarcoma of the ovary is very apt to provoke rather marked pain, profuse hemorrhage and considerable discharge. The occurrence of metastases will result in symptoms and signs dependent upon the site of the body involved. Metastatic lesions of the spine are rather common and there is then severe, intractable pain, referred to the region of the rectum and to the thighs.

Recently I had occasion to operate upon an individual for fibroma of the ovary. This particular patient presented relatively few symptoms, but she did have fever of low grade each afternoon, there was a sensation of pelvic pressure and general feeling of malaise with loss of weight. This individual, several years ago, had passed the menopause and had not noticed any enlargement of the abdomen until eight months before presenting herself at the Clinic. Complete examination, except for study of the pelvis, was relatively negative. Particular care was naturally used to eliminate the possibility of co-existing pulmonary disease. At surgery, a large tumor, found to be a degenerating fibroma and weighing five pounds, was removed.

It is difficult to enumerate the symptoms that are apt to be associated with the various ovarian neoplasms. The position of the growth, its size and its character determine the grade of pain present to a large degree. The majority of cysts which have become malignant, as well as the more solid types of ovarian tumors, provoke commonly extreme ascites. My associates and I on several occasions have encountered cases of torsion of cystic ovarian tumor and here invariably the picture of an acute abdominal catastrophe is evident. It is possible to confuse, though one should not, this disaster with an acute appendicitis. The history is not similar, though the physical findings may, to an extent, overlap.

There is another condition which I wish to speak of briefly, and that is granulosa cell carcinoma of the ovary. These tumors, while not common, are not surgical curiosities. They are of exceedingly great importance. In other words, in the woman who has passed uneventfully through the menopause and a few years later again begins to menstruate and whose sexual organs, including the breasts, become again more or less vascular, one always should suspect and very probably will find a granulosa cell tumor of the ovary. As a general rule the mass can be palpated through the vagina, but even in the absence of this confirmatory finding, with the symptoms enumerated, pelvic section should at once be done and in all probability panhysterectomy with removal of both tubes and ovaries should be performed. Granulosa celled tumors of the ovary are malignant, but they metastasize rather late and yield brilliant results through fairly early surgery. There is no doubt in my mind that a considerable number of cases of granulosa cell tumors of the ovary have been overlooked. I think often these patients with postmenopausal bleeding are treated by application of radium and certainly that is not the best choice of treatment. In the presence of malignancy, here as elsewhere. surgery should be done early and radically.

Endocrinology has come to play a rather large part in the treatment and handling of a great many gynecological cases. There is much that is obscure about this subject even at the present time. However, Novak has contributed quite a lot to our knowledge of the endocrines. Knauer and others in 1899 stated that ovarian influence in the menstrual cycle was of endocrine nature. Since that time there has been almost a continuous discussion as to the physiologic role played by the various constituent elements of the ovary. Time will not permit me, however, to go into a discussion of this phase, but I merely mention it and call your attention to the increasing importance of same.

As a general rule it is not difficult to make correctly the diagnosis of ovarian tumor. The history, coupled with bimanual pelvic examination, ordinarily establishes beyond peradventure of doubt the nature of the lesion, but it is often exceedingly difficult to determine the character of the tumor. It is impossible to say positively, without benefit of biopsy, if the condition is malignant or benign.

Finally, I would say that ovarian tumors are relatively frequent in occurrence. They are not rarely malignant, some authorities even maintaining that all are potentially malignant. The origin is still undetermined. Their symptoms vary, depending upon their location and the type of growth. Their treatment is generally surgical excision.

Methods of Lowering the Mortality In the Acute Surgical Abdomen*

V. B. PHILPOT, M.D.
Houston, Miss.

Mr. President and Gentlemen of the Thirteen Counties Medical Society:

I have nothing original to offer on the subject, but I shall bring to your attention some features practiced by us in our efforts to lower the mortality in acute abdominal conditions requiring surgical interference. I shall mention here the most common diseases of this nature in which we are most concerned: first, appendicitis; second, acute pelvic infections; third, diseases of the gallbladder; fourth, various forms of intestinal obstructions; fifth, ruptured duodenal and gastric ulcers, sixth, intestinal perforations from various causes, etc.

In order to lower the surgical mortality of any of the diseases mentioned above or other similar conditions it is of first and paramount importance to secure early surgical interference. There is absolutely no difference of opinion among the best men of this and other countries, concerning early surgery in any of these diseases, yet we are confronted, even in this enlightened and scientific age, with delay of surgical interference in handling these very common conditions that confront us almost daily. I believe in this, the Thirteen Counties Medical Society, we have as high a class of doctors in the practice of medicine in all its branches as in any state or country. I have in mind in my own experience a few doctors who have practiced medicine to my knowledge more than 20 years and have during that time had hundreds of major abdominal operations performed on their patients without a single death. The main reason why they have had no deaths is simply because when a diagnosis of the above mentioned conditions is made they make no pretense of treating them medicinally nor procrastinate one hour in advising them what should be done. I recognize the fact that the medical profession is rarely guilty of any procrastination concerning surgical interference when an acute surgical abdominal condition is diagnosed, and that in most instances the lay people themselves are slow to contact a physician and occasionally will not accept the advice of their doctor. I believe, however, the latter is rare when put up to the patient in a positive way.

Of course, all of us recognize the fact that attacks of acute appendicitis will sometimes subside, and lay people know of instances when this has happened. For that reason some of us are inclined to want to carry the patient to the hospital for blood counts and observation, and should the count stay low postpone surgical interference hoping the patient will overcome the attack, and wait about the operation until the next attack. This is a fairly safe procedure, but, gentlemen, if you want to keep the mortality low this is not the best practice, and, as I have already stated, it is not the practice advised, recommended, and insisted upon by all authors of this and every other country that I have ever read about.

We must remember that all the typical symptoms of any condition probably do not happen in more than half of the patients. In numbers of instances I have seen a pus appendix in patients with normal temperatures. Occasionally even the blood count doesn't go very high, and when we wait until all the typical symptoms, signs, and tests are positive we may wait too long. Furthermore, we are instilling into the lay people's minds an idea that it is all right to wait, and, in so doing, in the long run our mortality will be higher than those who have their patients operated on immediately when diagnosed. It is better to operate on a few patients when the appendix or other organs concerned are only slightly diseased or possibly not at all than to allow one now and then to go too long waiting for all the typical symptoms to develop and have them die as a result.

Regardless of the time of operation, the next most important principle necessary in lowering the mortality of acute abdominal conditions is to refrain from giving any kind of laxative, purgative, or enema before the operation, or, in pus cases, after the operation unless we are absolutely sure from all the symptoms and blood counts that the acuteness of the infection has passed. The mast tragic procedure that occurs to my patients with acute abdominal conditions is the giving them some form of purgation or enema previous to their admittance to the hospital, due in most instances to ignorance on the part of the family of the danger of this procedure, and as the result an appendiceal abscess has been ruptured and a spreading peritonitis followed. I recognize the fact that one outstanding man of this country, Dr. Finney of Johns Hopkins, has for several years administered castor oil for these acute conditions, but so far as I know no other person of outstanding ability in this or any other country advocates such a procedure, and all of us in this territory have seen too much of the detrimental effect of such procedures.

When a patient is received rather late and there is reason to bliev that we already have a ruptured appendix or a suppurative cholecystitis and a local or possibly a general peritonitis there is a wide difference of opinion concerning what to do. Many of the best men of this country prefer what is known as the Ochsner treatment, nistituted many years ago by A. J. Ochsner of Chicago and consists of rest in bed, hot or cold applications to abdomen, plenty of fluids intravenously, and morphine, and give nature a chance to wall off the infection.

Another procedure in this condition, practiced by many of the very best men of this country, including the late John B. Deaver, is to operate at any stage of the disease. A middle ground course is that advocated by Crile of Cleveland, which is to do a simple decompression under local anesthesia, insert a drainage tube, and institute and continue the Ochsner treatment.

In addition to these three methods of treating acute abdominal infections where pus is present and there is a leak, and we have a potentially infected field, I call your especial attention to that method of treatment advocated by H. A. Gamble of Greenville, and his associates, the general principles of which I have practiced for the past ten years. It has been demonstrated by Babcock of Philadelphia, and many English surgons that pus itself in the abdomen is not so serious as we have so long thought. In fact, Babcock insists that pus contains many antibodies helpful in destroying bacterial toxins. It has been demnstrated by Gamble, Heyd, Jennings and others than anaerobic organisms, particularly the Welch baccilus, are present in practically all stages of suppurative appendicitis and peritonitis and that these organisms, as well as the staphlococcus and other pyogenic organisms, are the causative factors in many abdominal incision infections. Gamble has demonstrated to his own satisfaction in dealing with a large series of cases over a period of twelve years that it is not peritonitis itself that produces death in most instances but tha it is a wound infection that produces toxemia which concerns us rather than the intra-abdominal infections. He has, therefore, since 1924 practiced the procedure of closing the peritoneum loosly around the drain and leaving the rest of the abdominal incision more or less open, allowing the best therapeutic measure, namely, air, to prevent and treat these infections.

The exact technique of this procedure is as follows: After doing what is necessary in the abdomen, for instance removing the appendix, gall bladder, or what-not, a tube is inserted in the lowest portion of the incision—if necessary other tubes inserted where drainage is indicated through stab dounds in other portions of the abdomen, the peritoneum closed down to the drainage tube, sufficient mattress sutures of silver wire introduced through the abdominal wall to the peritoneum to prevent disruption, a silkworm sutures introduced to the peritoneum, a sponge saturated with 2 per cent merchrochrome placed in the wound on the peritoneum, the silkworm gut sutures tied over the sponge in bow knots, and the patient placed so that drainage will absolutely occur by gravity even if it is necessary to turn him on his abdomen. At the end of the first twenty-fours the wound is dressed, the silkworm sutures removed, the pack removed, and the wound left open without dressing under a tent with 40 power electric lights. I quote here from Gamble's paper at the Southern Medical Association last fall as follows: "The pack is placed in the wound for the first twenty-four hours for four reasons. First, to maintain the stability of the abdominal wall and lessen the danger of disruption; second, for the bactericidal effect of the drug; thir, to promote the reversal of the flow of lymph; and, fourth, to stimulate the formation of an inflammatory barrier around the wound." As stated, the pack is removed in twenty-four hours, but no dressing at all is applied, the wound is left open and air allowed to enter at all times.

As I have stated, I have followed Gamble's method during the past ten years or soon after his first paper on this subject was read in 1925 at the Mississippi State Medical Association at Biloxi. and I am convinced from my experience on several hundred patients snice that time that his ideas are well worthwhile and that the above mentioned procedure is the greatest advance in the treatment of abdominal infections that we have had during the last quarter of a century. Our patients convalesce much easier, have far lower temperature, fewer complications, the mortality rate has been lowered nearly a hundred percent, and in Gamble's experience the death rate is practically eliminated.

When you think of the reason of this procedure you cannot help but be convinced, regardless of whether you have ever practiced it or not, that it is a very feasible one. No one would think of closing an infected wound outside the abdomen, for instance an infected mutilated wound of the thigh or a deep seated abscess of the muscular structure that we have just opened would surely be left open. Then why is the abdomen an exception? We have as much reason to close a wound elsewhere bathed with pus as we have to close an abdominal wound bathed with pus.

Now a few more principles in the treatment of acute abdominal conditions relative to the surgical technique. First, I emphasize the necessity of simplicity in any surgical procedure of the abdomen—what I mean is the importance of traumatizing the tissue as little as possibl ein doing the necessary operation. Second, the complete debridement of all necrotic or jagged tissue present and complete hemostasis before completing the operation. Third, where pus is present or it should become necessary to rupture an abscess, the importance of preventing the spread of infected material by proper packs, suction and otherwise, and liberating only the smallest number of adhesions incident to doing the necessary operation. Fourth, if possible secure drainage by gravity. In other words, insert tube or tubes in the lowest portion of the incision or through a stab incision that will give such drainage or by the position of the patient. In pelvic abscesses I find a good sized tube inserted through the posterior vaginal wall is always preferable to one through the abdominal wall, and the convalescence is far more satisfactory when this is done. In the post-operative treatment I emphasize the necessity of maintaining the water level of the blood by the careful, systematic, and slow administration of fluids, preferably a five per cent glucose solution in saline intravenously, and in cases of a ruptured abscess with local or general peritonitis, absolutely nothing by mouth until we have every reason to believe the acuteness of the infection has subsided. Further comfort and advantage to this class of patients, especially if nausea persists, is the use of the Levine nasal stomach tube with a negative pressure to keep all material regurgitating back toward the stomach or duodenum as well as gas in this region continuously eliminated.

Inconclusion I want to condemn the practice of operating on a jaundiced patient except as a last resort. I admit that I have operated on a number of jaundiced patients and in morst instances gotten by without harmful results. Recently, however, I had a patient with obstructive jaundice as the result of stones, who had been treated at home for sometime and whom I treated for one weak, giving large quantities of calcium lactate and glucose and other liquids to prevent bleeding before operating. I operated on this patient, removed the stones, and inseited a tube in the cystic duct, which was quite dilated. I encountered no large blood vessels in this procedure, and had complete hemostasis before closing the abdomen. This patient did well for two days, then began bleeding, the hemorrhage coming through the tube I had left inside the abdominal cavity but outside the gall bladder and ducts. After trying all the hemostatic serums we could find without results I opened this man's abdomen and inserted a pack from beneath the liver on up through the abdominal wound, and the bleeding stopped. I gave him a blood transfusion and he seemed in reasonably good condition. Two days later he began to bleed from the abdominal wound. I opened the incision, tied the bleeders, and packed the incision again, which stopped the hemorrhage completely. I gave the patient another blood transfusion and he was apparently in fairly good condition and went along for nearly two days before any other bleeding developed. The third hemorrhage started from deep down in the abdomen, an apparent general oozing. from which the patient succumbed. I report this case as a warning that a jaundiced patient will sometimes bleed to death, and I shall in the future be very slow, indeed, to operate on any badly jaundiced patient.

New, gentlemen of the society, as I have already stated, none of the procedures I have mentioned ar original with me and many of them have been re-hashed in this organization on previous occasions, but I call your attention to the fact that the death rate from acute abdominal conditions is such that it should be considered very seriously. The death rate from smallpox, typhoid fever, malaria, tuberculosis and even cancer, as well as many other serious diseases of mankind, has been lowered tremendously during the last decade, but statistics show that the death rate throughout the country as the result of the diseases I have mentioned in this paper instead of being lowered has been greatly increased during the last twenty years. Surely, then, it is one of the most serious problems that confronts the medical profession of our day. It behooves us, therefore, to religiously put into practice the great principles we have known for many years, which I have endeavored to emphasize in this paper, and which will reduce the mortality of these conditions. Not only should we do this, but we should inspire an educational campaign among lay people showing them how they may greatly assist in lowering the mortality of these very common diseases which are prevalent among us.

The Relationship of Medicine to the Social Parade*

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Pontotoc, Miss.

You may wonder why I have selected as my subject, "The Relationship of Medicine to the Social Parade," and what possible interest could a paper of this kind be to a group of men who have met to discuss scientific matters pertaining to their particular field.

Reasoning from the standpoint of relative and potential values, the answer would be, that there are other phases of the practice of medicine, which require as much analytical study, if we are to succeed, as diagnostic accuracy and therapeutic efficiency.

If there were no social problems, there would be little need for a medical profession, and consequently we should valuate our relationship to the social parade.

One does not have to draw on his imagination to conclude that our social structure is a kaleidoscopic panorama in mass parade, and that it taxes the ingenuity of the most astute of minds, to even relatively determine what the destination will be; therefore, as men of a scientific profession, who have elected to render the greatest service to the greater number, we must understand the position we occupy in this parade.

One would say that our position is that of servant, because we propose to render service, still another would say that we occupy the position of an honored and dignified profession, and that therefore we should hold an honorable position, and should command the respect and confidence of the whole parade, by reason of this position. If we hold the respect and confidence, and expect to continue to do so, we must not only sit on a pedestal of dignity, but sufficiently acquaint ourselves with mass thinking and objectives, to gently exercise the functions of a steering committee, for the mass as a whole.

It is my belief that we should not only be able to treat the physical ills of mankind in a scientific manner, but by reason of our peculiar training, we should be able to understand human fancies and foibles, and associate them with the significance and bearing they have upon physical infirmatives, so that we may be able to assist in keeping the parade traveling toward a sensible goal, and in a more orderly manner, with a reasonable hope that civilization will maintain its equilibrium.

In our zeal to improve diagnostic accuracy, and therapeutic efficiency, I fear that we have failed to consider the structure of our social fabric, and that we too have become enmeshed in a maelstrom of uncertain destination, unless we reconstruct with care "The Relationship of Medicine to the Social Parade."

The social parade embraces every phase of our national life, which includes religion, education, economics, politics and social, and not at all infrequent does each or all of them have quite a bearing upon our physical ills, and must be considered along with our scientific endeavors. Sound religious convictions and practices should occupy a dominant position in our social scheme, because it is a something we call Divine, which prompts every living human being to tread the paths of rectitude, and acknowledge the fact that he may be his brother's keeper; therefore, the medical profession must look with some degree of certainty or skepticism, as conditions may warrant, toward our religious structure, in maintaining our desire to render the greatest service.

Economics of a sound and enduring nature, is necessary if the social fabric is to withstand the vicissitudes of time, and cannot be lightly considered by MEDICINE if it maintains its proper relationship to the social parade.

Education is a delicately fabricated structure, from which all useful and usable information is derived, and if we are to have an enduring civilization, structural defects of our educational system, must be sought out and repaired or the whole fabric may become weakened and result in decay.

Politics—it is with some degree of trepidation, and tactical approach, that I mention the political elements of the social structure, but they form such a prominent part of the fabric, that one cannot discuss the question of the social order without giving politics very, very prominent mention.

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*Read before the Northeast Mississippi Thirteen Counties Medical Society.

You ask the question, and very properly so, what bearing does all of this twaddle have on the profession of medicine. I shall undertake to answer that question briefly.

Wherever groups of people have lived together or in proximity, a MEDICINE man was selected to administer to their bodily ills, sometimes in oracular fashion, by incantations and prophesies, and sometimes by miserable decoctions, each were sufficient unto the times and places, and are not an unknown quantity at this time. Every man of medicine realizes the powers of suggestion, and the psychology in mass thinking.

Formerly, the medical oracle was looked upon as a sort of superior being. Today, he is consulted in all communities, on all questions affecting the welfare of society, as a man whose opinions may be relied upon, if he has conducted himself with any degree of decorum.

Formerly, medicine, like our economic structure, was carried on by the results of rugged individualism. Today we are thinking in mass terms, and are likewise conducting our practices. Today we have rugged individualism in medicine, but he has come to realize that his efforts must be transmuted into organized effort if the greatest good comes to the greatest number, by reason of his efforts and capacity for acquisition and dispensing.

Due to organized efforts, and the coordination of its forces, medicine has made wonderful progress in diagnostic accuracy, and therapeutic efficiency. There is probably no other body of scientific men which has accomplished as much in the scientific field. There is probably no other body whose economic status is as much out of balance with the social parade, as organized medicine. We are in possession to a wonderful degree of useable and useful scientific knowledge and skill, but we are so much out of step economically with the social parade, that we are groping in darkness for a means of transmuting that knowledge and skill into terms of service to the greatest number in a manner that will be economically sound and guarantee professional stability.

Some years ago the spectre of socialized medicine was but a mirage on the dim distant horizon. Today it is a phantasmagoria, of undetermined proportions which seems to be shaping its talons to gather us in its clutches.

Today, with its knowledge, and skill developed to a wonderful and practical degree, medicine should occupy a secure position in the social parade; but instead we are beset with indecisions, doubts and fears, on a rudderless ship on a storm tossed sea of economic adventure.

It is certain that if we are to arrive at a safe destination, the economic structure of medicine must be kept in tune with the per ambulations of the social parade, and conform to and supply the needs to all of its members.

Here in Mississippi, in my opinion, the foundation, and the framework, has been constructed, which will reasonably guarantee us a position of security in the social parade if we but lend intelligent assistance.

We have well equipped and conducted community hospitals, easily accessible to all communities. Recently the legislature, through the overtures of the medical profession, has appropriated moneys on a percapita basis, to be used in the treatment of the indigent sick within our borders. A form of socialized medicine to be sure, but who can gainsay that this is sound relationship to the social parade.

With community hospitals easily accessible and properly administered we have foundation for a medical structure which should be economically sound and scientifically correct, With a state subsidy administered on sound democratic principles, we should have the framework, although it be semi-socialized medicine, that would allow for the building of a medical structure which is a pioneering adventure into the realm of professional idealism, permitting the transmutation of all that is best in medicine to terms of service to the greatest number without sacrificing any of the traditional principles of professional ethics, and thus establish a congenial relationship of medicine to the social parade.

DISCUSSION

Dr. G. S. Bryan (Amory): The essayist has brought to our attention a subject of much importance. He has presented it in an attractive way. But the subject is so large and comprehensive that it has been absolutely impossible for him to cover it in detail. In fact, it seems to me as if he has simply opened the door, as it were, to a vast museum filled with specimens for inspection and invites us to examine and study for ourselves. Medicine has always been and always will be related to society and civilization. A close study of one will reveal the other. Civilizations and cultures have sprung up and developed and have fallen and disintegrated. Medicine usually keeps exact step, flourishing and declining in the same ratio. One who cares to follow the development of medicine and has not time to go deep into the general history of its progress and its recessions would be interested and enlightened by reading a very small volume that issued from the press of The Doubleday publishing company just about three years ago. This little book was written by Dr. H. W. Haggard of the Yale faculty. It is entitled Mystery, Magic and Medicine. In all periods of the world's history there have been "medicine men" and these have been recognized and credited with the faculty of controlling, to some extent, the course of disease. In the mystery period the public mind was kept in profound ignorance of the powers exerted in such control as well as the sources from which these powers were derived. But quite naturally the inference drawn was that they were divinely given. But the "social parade" like the course of time moves on and the "magic period" is ushered in. In this period the relation between cause and effect has been recognized altho not fully comprehended. In this period diseases and afflictions were generally attributed to the influence of evil spirits and relief from them was to be had only by placating these evil spirits. To insure this, some form of sacrifice, incantation or worship by the medicine man was necessary. Occasionally, if he were bold enough, he might resort to procedure by which evil the spirit might be frightened or buldozed, as it were, into yielding or withdrawing his curse from the afflicted one. In both these periods sick men recovered and sick men died even as they do today. In face of recovery the medicine man received credit—in case of death the evil one was feared and magnified the more. Today, "if the man get well they praise the Maker's name; if he dies the **doctor** gets the blame." (And I wonder if this, in many cases, is not about as it should be?) In the two periods that have been briefly sketched, it must be evident that all benefits rendered—and I believe benefits were rendered—were, necessarily, due to the force of pychology. We must look at the period that has been designated as the period of medicine. By this we understand **scientific medicine.** And I yield first place to no man in my homage, admiration, and respect of and to real scientific medicine. But I wonder if most of the cures that result from the ministration of the medicine man of today are not, as then, due to the force of psychology? Again, I wonder if a great percentage of deaths may not be due to mistakes made in the name of scientific medicine? Several decades have come and gone since my entry into the profession of medicine. During these decades great things have been discovered and done. Since that day appendicitis has been recognized as a medical entity—appendectomy has been popularized and abused. The discovery of and the use of antitoxin for diphtheria has come about. Typhoid fever has been relegated to the past, as it were. Great achievements have been made in surgery. The X-ray, the broncoscope, the cystoscope and many, many other helps have come to us. While all these are, in many instances, used simply to confuse the lay mind and give the impression that the **impossible** has been accomplished or may be expected. After much thought and close observation, I have arrived at the conclusion that most of us as doctors are not keeping pace with the "social parade." I fear that most of use belong in the "magic period." Just as the medicine man of that period seems to have had faith in, and inspired faith in others in his incantations and antics, we seem to have too much faith in our remedies and contribute much to the false faith that is held in our drugs and placebos. Go if you will, into almost any doctor's office today and note the array of spectacular but useless paraphernalia. Follow him into his consultation room and observe him closely. If he does not take the patient's blood pressure and gravely inform him that it is too high, it is due to an oversight or laziness. Once inform a man (especially a woman) that the blood pressure is too high and you have made a psycho-neurotic. An irreparable damage has been inflicted. We are rapidly becoming a nation of neurotics and I believe that we doctors are much to blame. We are honest—most of us—but we have deceived ourselves or have allowed ourselves to be deceived and are deceiving the public. Permit me to illustrate. A short time ago, a dentist residing in another state visited my office. I asked him concerning a physician residing in his town. He said, "he is doing well—he is a fine man" (and he is). But he added, "a few days ago, I was talking with him on the street—A gentleman said to him 'Doctor, I feel bad—I want you to take my blood pressure'." "As they walked away to the doctor's office, I said I, too, am feeling bad—if it helps that man, I want you to take my blood pressure too." Another example quite to the point! A very intelligent lady of my acquaintance and clientele visited her sister who is quite ill in a large city in another state. She found her in the hospital waiting for a goiter operation. She says that there was no visible evidence of goiter but that an instrument costing many thousands of dollars was used and **it** showed that there was a goiter existent. Of course you know the facts in this case. When I began the practice of medicine, much was said and written about specific cures for disease. I believed in them too. Now, I do not believe that any drug or therapeutic agent is, of itself, a specific cure for disease. All cures must, of necessity, be due to "vis medicatrix naturae." The best that can be expected of any drug is that it may set up or aid this physiological function. In my day attention has been drawn to the glands of internal secretion. The doctor of the future must not only know the physiology and the anatomy of the normal man as taught today but he must know and understand the biochemical processes of the human body, if medicine is to keep pace with the social parade.

Doctors, I feel that many of us are sleeping at the switch. Let us arouse from our present lethargic slumber and go forward in double quick step. Else we may be found out of relation to the "SOCIAL PARADE."

Essential Hypertension*

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Of all adults 15 per cent have hypertension and 23 per cent of all deaths of patients who have passed the age of 50 are directly attributable to this disease. Hypertension is thus seen to be one of the most common and most serious conditions with which we must deal.

There has been a great deal of confusion in regard to classification of hypertension. Essential hypertension has been applied to that disease in which blood pressure is permanently increased without known cause. While the term secondary or "malignant" hypertension was applied to those elevations of pressure following known causes such as glomerulonephritis. Of recent years however it is being claimed that there is only one type of hypertensive disease with no fundamental differences in the processes except for the rate of progression. The confusion between the histological picture in chronic glomerulo-nephritis and that in essential hypertension is cleared up by the recognition of the fact that in the latter the arteriolar lesions precede the lesions in the glomerulus.

The immediate cause of essential hypertension is unknown. An increase in tonicity of the arteries is responsible for the disease though what brings about this increase is sometimes an open question. Two structures are thought to play important roles—the suprarenal glands and the sympathetic nervous system. It is clear that certain cases of hypertension result from disorders of the suprarenal glands. However, more and more attention is being directed toward the part played by the sympathetic nervous system. It is a known fact that stimulation of the sympathetic system causes temporary hypertension by provoking a vasoconstriction. An example used by Allen is that if a shot were suddenly fired in the back of this room the surprise would cause a temporary elevation of blood pressure in every individual here. The degree of response of blood pressure and the speed of its return to normal would vary in different individuals. Those cases in which the increase in pressure was greatest and the period before it returned to normal was longest would be the cases in which the sympathetic vasomotor nervous systems were hyperirritable.

Thus heredity and environment play a major part in the production of hypertensive states. Heredity in that certain individuals are endowed with hypersensitive vasomotor mechanisms. Children of parents with hypertension are much more likely to have hypertension than those of parents whose blood pressure is normal. Even though the child of a hypertensive parent may have a normal pressure there is likely to be a vasomotor instability present which causes them to react to certain stimuli in the same manner as an individual with hypertension.

It is probably that environment plays a role in that it may retard or suppress an inherited tendency to hypertension. Likewise it may do the opposite and provoke an earlier or more intense hypertension in individuals who possess hypertensitive vasomotor mechanisms. In this modern age with its greatly multiplied difficulties of living and adaptation to environment there are probably thousands of episodes of sympathetic stimulation every day, each one followed by temporary hypertension. The arterioles are first intermittently spastic, later continuous hypertonicity occurs and the arterial musculature responds by hypertrophy so that the end result is organic changes.

To quote Allen, "Hypertension then is to be viewed, not as a disease of sex, race, diet, climate, or occupation but in its true light, a disease of heredity and competitive life."

The clinical picture of essential hypertension is sufficiently well known that it does not need extensive discussion. The symptoms which bring the patient—usually between forty and fifty as likely to be a man as a woman—to the physician are usually disturbances in kidney function, or cardiac or respiratory complaints, vertigo, persistent morning headaches or unusual drowsiness. The height of the systolic pressure may vary from 160 to 300, diastolic from 90 or 100 to 120. A thing to remember is that the first reading is unreliable.

Patients consult the physician because of fear, and fear increases blood pressure. Thus a physiologic increase may be mistaken for a true essential hypertension. It is a good practice to leave the blood pressure cuff on the arm and take several readings 5 or 10 minutes apart. The mean of these determinations will give a fairly accurate picture of the vascular pressure. After this special attention should be directed toward the cardiovascular system. In most cases the size of the heart, condition of the peripheral vessels, eye—ground study, plus study of kidney function will suffice. We are then ready to work out a plan of management.

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*Read before the Northeast Mississippi Thirteen Counties Medical Society.

TREATMENT

A rational program of treatment begins with a period of rest in bed. During this time frequent readings should be made and usually a drop in pressure will be found. This encourages the patient and shows him the value of rest. If he can be shown that when he is relaxed and serene, his blood pressure is lowered but when he is on tension, hurried and worried, his pressure is up and can be shown this early, he himself will have an understanding of the benefits of relaxation and through his own knowledge will be ready to cooperate.

The action of drugs can then be determined. Most of the drugs have been tried and found wanting. By far the most valuable are the sedatives. Under controlled conditions it can be shown that the administration of large amounts of sedatives will cause the blood pressure to drop and will abolish increases in blood pressure following stimuli. Of course the sedative effect of large amounts of drugs would prevent the routine use of them, for the patient would be unable to carry on a normal life. The amount to be given should be large enough to abolish nervousness and restlessness and small enough to avoid drowsiness and slowed mental reactions. A combination of phenobarbital and bromides works very nicely given 3 or 4 times daily, the dosage varying with the individual. The subjective symptoms will improve even though the pressure is not lowered and that will help a great deal in that anxiety and worry is relieved. Various other drugs reduce the blood pressure temporarily by causing vasodilation. The effect is usually of too short duration to be of benefit.

Diet is being looked upon as of less and less importance. Quantity is more important than quality. There is only one dietary principle involved and that is to reduce overweight. There is no evidence that protein is responsible for hypertension and no evidence that it is harmful. So long as kidney function is normal, to forbid meat and eggs may do more harm than good. After the patient has spent a period of time in bed and we are ready to let him up, our prescription of rest requires fine judgment. He should sleep nine or ten hours at night and lie down in a quiet darkened room for an hour or two at noon. When possible a quiet, peaceful place should be selected to spend the week-ends. This is the ideal and with some patients it cannot be followed.

The lives of all individuals are occupied by non-essentials. The pleasures which these activities give must be weighted against the benefits to be derived from their elimination. Quite often a patient will be seen who is happy only while living a forceful, dynamic life. His accomplishments and not his life span are important to him. He probably cannot be dissuaded to change his habits. For him then we can accomplish but little for he adopts the motto "Life has breadth as well as length."

Recently the problem of treatment has been approached from a surgical standpoint. Bilateral suprarenalectomy and resection of splanchnic nerves have been performed and each has its enthusiast and each is based on sound principles. Only the test of time can show us the value of these procedures.

The prognosis is always uncertain. Hypertension fixed at a high level is more serious than that which fluctuates from high to nearly normal because total vascular strain is much greater and organic changes are more advanced. The most important factor is rapidity of progress. A short span of life can be predicted for individuals who show moderate changes in heart, blood vessels or kidneys if such organs were known to have been normal two or three years previously. But a favorable prognosis given to the patient, even if eventually wrong, is better than a grave prognosis, right or wrong.

Tuberculosis Abstracts

Early promoters of the tuberculosis movement hoped that tuberculosis might at least be curbed. Today some are advocating that the objective should be to eradicate disease rather than merely to maintain partial control. It is a grave matter however, says Wade H. Frost, in an article in the American Review of Tuberculosis, to hold out to the public the expectation of eradicating such a disease as tuberculosis unless the expectation rests upon sufficiently solid ground. This ground he examines critically and suggests that further search be made for every item of information that might throw light on the subject. Abstracts of the paper follow.

CAN TUBERCULOSIS BE ERADICATED?

The most conspicuous fact in the history of tuberculosis in the last 50 years has been its steady and rapid decline in mortality. In view of the circumstances under which this has taken place and in the light of what is known of the natural history of the disease, is it reasonable to expect that the downward trend may continue indefinitely, perhaps to the point of regional suppression of the disease, or is it more reasonable to anticipate a compensating upward swing to a higher level?

The extermination of an infectious disease is not simple. This is especially true of the endemic diseases caused by obligate parasites of man transmitted directly from person to person by way of the respiratory tract. In general, the diseases of this group have shown no consistent, substantial decrease in recent years. Diphtheria and scarlet fever have, indeed, declined greatly, but it is by no means certain that this has been due largely to environmental control. Their past history shows wide variations in prevalence and severity; and, in diphtheria, specific immunization and therapy have played a part.

It seems evident that the best modern environment sets no effective barrier against the common endemic infections transmitted directly by way of the respiratory tract. It is demonstrable, in one way or another, that very few people escape infection, clinical or subclinical, and that escape from the diseases themselves must be credited more often to human resistance than to avoidance of exposure. Against such diseases specific immunization appears to be the logical method of attack, and smallpox, against which it has been applied, is the only disease of this group which has been regionally eradicated.

The belief that it is practicable completely to prevent dissemination of infection transmissed from person to person by way of the respiratory tract is no longer tenable. Therefore, if the expectation of eradicating tuberculosis rests upon complete avoidance of infection, it must needs be abandoned for the present. However, the condition necessary for eradication of an obligate parasite is not that transmission be immediately and completely prevented, but that it be lowered and held permanently below the level at which a given number of infectious hosts succeed in establishing an equivalent number to carry on the succession. If, in successive periods, the number of infectious hosts is continuously reduced, and this declining ratio is continued long enough, extermination must be the result. Within historic times many species of animals have been exterminated, regionally or entirely, by man's intervention, throwing the biological balance against them, and it is not inherently improbable that the tubercle bacillus should be similarly exterminated as the result of human interference with its propagation.

It is true that the tubercle bacillus falls in that general group of pathogens against which environmental barriers are of least effect, namely, those which enter and escape by way of the respiratory tract; but it is differentiated from the other organisms of this group by an unusual combination of conditions limiting its propagation and rendering it peculiarly vulnerable to artificial interference. These conditions are, first, that in order to escape from its host it must cause a lesion which breaks through to the surface, and, second, that it succeeds in producing such lesions in only a limited proportion of infected persons. Various other pathogens limited to the human host are subject to one or the other of these conditions, but not to both. For instance, the virus of measles appears to be spread only from persons actually suffering from or in process of developing the eruptive disease; but it is so highly infective that it succeeds in producing this effect in nearly all persons who survive to adult age. On the other hand, the diphtheria bacillus, the pneumococcus, the virus of poliomyelitis and various other pathogens transmitted by way of a respiratory tract, cause clinical disease in only a small proportion of those who are infected; but actual disease is not essential to propagation of these microorganisms, since subclinical infections, being equally "open," suffice to spread them from host to host, and to perpetuate the species. The combination of the two limiting conditions is the peculiarity of tuberculosis.

Because of this combination of limiting conditions, it is reasonable to infer that tuberculosis may be reduced to an indefinitely low level, even to regional suppression, by isolation of identifiable cases and by other measures of environmental control which are ineffective in the control of numerous other diseases transmitted directly from person to person by way of the respiratory passages and this inference is broadly confirmed by the facts known about the past and present distribution of tuberculosis in different parts of the world and in different strata of the population. The fact that at the present time tuberculous infection, as distinguished from the disease, is widely prevalent is not inconsistent with this view of the controllability of the disease.

With improved measures of control which are within the limits of practicability, including better detection and isolation of open cases, with higher standards of living and personal hygiene, there appears to be no fundamental reason why tuberculosis may not be virtually eradicated from large areas in this country. While there are certain contingencies which obviously might bring about a recrudescence after the disease has reached an extremely low level, it does not appear that this result is inevitable in accordance with any accepted biological law or that it is especially to be anticipated.

Admitting that we cannot actually know the future of tuberculosis, it is none the less important that we should clearly define what are reasonable expectations in the light of present knowledge, since present activities in study and control necessarily are directed chiefly toward the future. If, as I believe, it is reasonable to anticipate control to the point of permanent regional suppression, the establishment of this as the objective has obvious and important implications as to the scope and intensity of control measures. It has less obvious but important implications with respect to indicated lines of investigation.

The Outlook for the Eradication of Tuberculosis, Wade H. Frost, Am. Rev. of Tuberc., Dec., 1935.

Mississippi Postgraduate Class at Tulane

First row siting left to right: Dr. Kazar and Dr. Seale.

Second row sitting, left to right: Dr. James, Dr. Young, Dr. Causey, Dr. Ray.

Standing from left to right: Dr. McElwain, Dr. Wilson, Dr. Elizabeth Bass, Dr. Nichols, Dr. Pharr, Dr. Emerson, Dr. Gregory, Dr. Covington, Dr. Speck.

Dr. Kazar, president, Postgradute Class; Dr. Covington, vice president, Postgraduate Class; Dr. Speck, Secretary, Post graduate Class.

ALONG THE MEDICAL HIGHWAY

JACKSON, Miss., June 25.—The state board of health today released the the list of new doctors granted license to practice in Mississippi. There were 30.

Those granted licenses by reciprocity, or by their licenses from other states, were as follows:

Dr. William Marion Hall, Bay St. Louis, from Tennessee; Dr. Lucius Lamar Terry, Macon, from Alabama; Dr. Byron Alexander, Electric Mills, from Tennessee; Dr. Charles Frank Lacey, Thomastown, from Louisiana; Dr. Truss Malcolm Brister, Jackson, from Louisiana; Dr. Henry Manley Wadsworth, Hernando, from Tennessee; Dr. Lawrence Boykin Hudson, Hattiesburg, from Louisiana.

In addition to the regular medical license, a license to practice osteopathy was granted to Dr. Henry Tete of New Orleans.

Dr. Robert A. Cameron, Dr. George Clarence Carlson, Dr. Jess Robert Hightower, Dr. Frederick Lindsey Richer, Dr. Guy Thompson Vise and Dr. Horace Clemence Watkins, Jr.

Licenses were granted the following, who took their examinations on the last two years of medical work, including six subjects, having passed the others two years ago:

Dr. Lynn Dunlap Abernathy, Dr. Everett H. Crawford, Dr. Shelley Rice Gaines, Dr. Merrill O. Hines, Dr. Alfred Joseph Messina, Dr. Hunter Ledbetter Scales, Jr., Dr. James Arthur Sproles, Jr.

Dr. Robert Peyton Vincent, Dr. Hal Windham, Dr. Verner Smith Holmes, Dr. James Lafayette Hall, Dr. John William Pender, Dr. Pratt Irby, Dr. Thomas Alexander Baines, Dr. Martin Luther Flynt and Dr. Charles Roderick Jenkins.

Grateful Atlantic City hotel men, appreciative of the fast tat the American Medical Association voted to hold its 1937 meeting in that city, gave a testimonial dinner recently at the Hotel Traymore in honor of the four delegates from New Jersey and the Director of the great Atlantic City Convention Bureau, Albert Skean.

The delegates who were honored were: Dr. Walt P. Conaway, and Dr. Hilton S. Read, of Atlantic City; Dr. John Hagerty of Newark, N. J., and Dr. E. R. Mulford, of Burlington, N. J.

Arrangements for the dinner were made by Bennett E. Tousley, General Manager of the Hotel Traymore. The object of the dinner to the delegates of the American Medical Association Convention was to honor the Medical Fraternity of the State.

Dr. J. Rufus Johnson, of Jackson, Mississippi with offices in the Standard Life Building has accepted temporary assignment as Medical Officer with the Veterans Administration and is located at the Veterans Hospital, North Little Rock, Arkansas. While in Jackson Dr. Johnson limited his practice to Urology and Proctology. Prior to locating in Jackson Dr. Johnson had extensive postgraduate training in the East. Dr. Johnson was elected to membership in the American Urological Association at its annual meeting in Boston, May 18 to 21. This is considered quiet an honor as he is the first and the only member of this organization in the state of Mississippi. In addition to being a member of the national association Dr. Johnson is a member of the Mississippi State and Central Medical Societies, as well as a member of the Executive Committee, Southeastern Branch Society of the American Urological Association.

Because of the many outside duties which Dr. Hunt has found it imperative to attend to, he felt that it was necessary for him to relinquish the Director-Generalship of the American Medical Editors' and Authors' Association. He also felt that he had laid the ground work and that, perhaps, some new blood might encourage the activities of the Association. After conference with the Officers and Executive Council, Dr. Harold Hays was requested to take the position of Director-General. He has agreed to assume this responsibility for the time being. It is, therefore with pleasure that we announce that Dr. Harold Hays of New York City, who has contributed a great deal to medical literature and has been Associate Editor on a number of medical journals, will assume the office of Director-General on August 1st. Dr. Hays has agreed to cooperate in this capacity for this year, at least, and we feel that with his active ideas and imagination he will be able to create a great deal of enthusiasm for the Association. We know that it is his intention to write to all the members requesting them to give their opinion about the Association and asking them for suggestions for the betterment of our work. We sincerely hope that all the members will actively cooperate and that we shall see results even more eminently successful at the end of another year.

"We consulted several specialists, and all of them confirmed our fears, but none offered any solution of our problem." Thus the mother of a small deaf child wrote to the Volta Bureau. The sentence might be quoted verbatim from many letters written by parents of deaf or hard of hearing children, or by hard of hearing adults.

The knowledge that deafness is present and that it is incurable comes with the force of a major calamity. It is so crushing in its effect that something positive in the way of help must be offered immediately, if the individual is not to spend desperate years in a bewildered effort to adjust himself. The parents of a deaf child must be told that the child can be taught to speak and can be successfully educated, and that this education may be begun at home immediately, even if the child is not more than two years old. The parents of a child whose hearing is only slightly impaired must be given advice as to his adjustment. The hard of hearing adult must be told about lip reading, about hearing aids, about social efforts in his behalf.

The Volta Bureau was established for the purpose of furnishing all this information to all who ask for it. Its services are free. Alexander Graham Bell, the son of a hard of hearing mother, the husband of a deaf wife, the lifelong friend of everyone handicapped by deafness, used the money received as a prize for inventing the telephone to found the Volta Bureau so that anyone confronting the problems of deafness might be assured of help. Advice is given as to schools and preschool training, lip reading instruction, hearing aids, social contacts, psychological difficulties. While the Volta Bureau is not equipped to do employment service, it gives information in regard to the fields of activity that are open to the deaf and the hard of hearing.

The Volta Review, a magazine for parents and teachers of the deaf and for the hard of hearing, is on the reading table of many physicians. Pamphlets dealing with all phases of deafness except medical problems are available to all who ask for them. Lists of such pamphlets and sample copies of the magazine will gladly be sent free of charge. The Volta Bureau is located at 1537 35th St., N. W., Wasnington, D. C.

Five Extensive Postgraduate Lectures in Pediatrics, in Council Chamber, City Hall at Clarksdale. Five extensive lectures in one week beginning Monday, July 6, 1936 at 1:30 p. m. o'clock by Dr. Robert A. Strong, Professor of Pediatrics, Tulane University, New Orleans.

Editor Mississippi Doctor,
Booneville, Miss.

Dear Doctor:

On page twenty-six, second column, in your June issue, there is a discussion evidently aimed at the resolution I intrcduced before the House of Delegates at Greenville.

Just prior to this discussion the writer has a great deal to say about the resolution that would prevent physicians from rendering service to rehabilitation families for less than regular fees. In other words, he quite correctly objects strongly to Washington officials making a fee schedule for the physicians in his county. The main objection to that form of state medicine, so far as the writer is concerned, must be due to the difference in distance between his county, Washington, D. C., and Jackson, Miss. The principle is identical. The State Board of Health has no more business going into any county and taking on contract, preventive medicine than Washington has of contracting for the care of thier families on resettlement farms. Yet, this has been going on for many years. There is a definite sphere in which the State Board should work but the limitation should be most definite. The physicians residing in a county can either make or break any health program; then, why should politicians in Jackson decide how such local work should be carried on and to whom such work will be given, and how much the pay will be It is a local function of government, and the physicians of the county concerned should be the ones to pass upon such matters. If this is "BOLSHEVIK" as your writer claims, it is high time that all general practitioners get in on the movement.

We now have an extension of the State-medicine idea in that the pauper sick may go to any private hospital and have his hospitalization paid for from state funds. The general practitioner that has used his gas and oil to ride twenty-five or thirty miles to advise the patient that he should be in the hospital receives no compensation whatever unless he should be a stockholder in the hospital and receive something in the way of a dividend. When it is suggested that some provision should be made to avoid such injustice, your writer thinks it "ICONOCLASTIC."

I would like also to call attention to this fact. On the last day of the session at Greenville, I had a complete list made of all physicians that had attended the meeting. By actual count the number was one hundred and thirty-five. There are evidently other "BOLSHEVIKS" in the state who have given up any idea of receiving any benefits from the machine operating at the State Medical Association. If the State Board, on an average, controlled only two medical men in each county that would give them an attendance of one hundred and sixty-four.

Our state government, to say nothing of the Federal, is entirely too welded down with powerful machine-groups. As members of one of the most idealistic professions we have, we should not permit a machine to grow up in Jackson that threatens political interference in every campaign that comes along. We are not the only group by any means doing this; we can be one of the first to stop it.

I shall appreciate equal prominence for this discussion.

Very truly,
JAMES C. RICE, M.D.

The editor of The Mississippi Doctor was recently invited to a monthly meeting of the Alcorn county doctors. This society has a hundred per cent membership. They have no dues. They pay as they go. Dr. J. R. Lanning is the genial president and Dr. Stanley Hill the efficient secretary. During the fall and winter they have carefully prepared scientific papers. When spring comes the play spirit takes hold of them and they meet and have a good time. The last two meetings they had experience meetings, amazing and unusual cases. Anything of interest coming to their mind they discuss according to their natural bent. This is the liveliest county society we know. They have made progress. A fine fraternal spirit is evident. This society is improving every phase of the practice. Their meetings are bringing good to themselves and to their clientele. A keen accurate observation is needed by every practitioner. We need to take note of our cases. The general practitioner can add valuable information to medical literature by observing and recording clinical symptoms, by passing on his interesting cases. After attending this meeting we decided to have a department in the journal open to any practitioner in the Mid-South for interesting cases, bits of human philosophy and social economy. We hope it serves to give valuable information to the profession. We are indebteded to Dr. Stanley Hill for the greater part of the first instalment. He will continue to help us.

Dr. G. W. G., in discussing a paper on Tonsillectomy presented by a prominent eye, ear, nose, and throat man, stated that the writer failed to operate on one referred case. He concurred in the diagnosis of a malignancy that was made at clinics in North Mississippi, Memphis and elsewhere. After treatment with radium failed, the patient, an adult white female, sought help in Chicago where the condition was still thought to be a cancer. By this time she was markedly emaciated and in such a weakened condition that rest in a Corinth hospital was required in order for the return trip home, Rienzi, Miss., to be endured. After three days she was dismissed to go home to die. Three weeks later a chicken bone was coughed up. The patient made a prompt recovery and has been enjoying good health since.

Dr. J. R. L. reports a case in which a lady broke off half a sewing needle in the thenar eminence of the left hand. Thirty years later it was recovered from below the spine of the scapula.

Dr. J. R. H. extracted a sharp object on which Mrs. John K. had pricked her hand while rubbing her abdomen late one night. Examination revealed it to be a sewing needle which carried eighteen inches of a kind of thread which had not been used in her house for twenty years.

Dr. C. W. N. having listened to the two above reports did not wish to be outdone. He recovered a needle from the left hip of a lady 42 years old. This patient swallowed a needle at the age of six. The doctor parenthetically explained that he did not know whether this was the same needle or not!

Case history by Dr. W. A. J. A white male, age 18, while gathering corn one autumn, inhaled a cockle-burr. It lodged in the right lung causing the patient to suffer from paroxysms of coughing, become emaciatd, and run a febrile course similar to that of pulmonary tuberculosis. Approximately a year later the cockle-burr was coughed up at the end of a declamation that the patient had given as part of a Thanksgiving Day program.

The patient gave more details: The burr was sucked in when he opened the mouth and inhaled in preparing to yell a driving signal at the team. It did not touch any part of the mouth or throat except the uvula, and lodged at a point in the sixth interspace in the right nipple line where it remained for the entire year. In touching the uvula a tickling sensation resulted. The cough was described as a "running-go" type. The paroxysm would start with rapid coughs, the rate of which would increase until the fit ended leaving the patient exhausted. Having observed this "running-go" type of coughing in several other cases with a foreign body in the lung, he concluded that this symptom is pathognomonic. The burr after being coughed up was slick on one side, but retained the stickers on the other. Although he has had a weakened chest since, the patient improved and in now sixty-four years old. Frequent attacks of bronchitis cause considerable trouble. The patient is the retiring president of the Mississippi State Medical Association, Dr. J. R. Hill.

Another report by Dr. W. A. J. was the case of a thirty-six year old negro who inhaled a cockle-burr while running through a cotton patch. Cough, fever, emaciation, hemoptysis, and night sweats followed. Several doctors pronounced him tubercular. He recovered 12 years later when the burr, which only retained the two large stickers at the end, was coughed up.

Dr. D. D. C. relates that an Italian women underwent a Cesarean section at the Francis Willard Hospital at 5 a. m. At 6 p. m. of the same day, having reacted from the anesthetic, the notion struck her to go home. She walked to the elevator, rode down from the seventh floor while standing, walked out to the street, summoned a cab, rode across Chicago to a flat where she climbed the stairs to the third floor to reach her apartment. The patient made a prompt recovery.

A negro couple from Alabama applied to Dr. L B. B., Iuka, Miss., for examination stating that they were required to have a health certificate before they could get married. After finishing with the two the doctor found a jet black negro in the waiting room dressed for the occasion in new breeches and goggles, who was playing the dual role of chauffeur and best man. In a jocular manner the doctor asked if he also wanted an examination. The negro after dropping his head for a moment in deep thought, replied, "I 'spec' you had better 'xamine me. you know I'se gwina live with 'em."

dear doctor my wife have lost her recompense for me and am agiving of her distribution to another man please send me some powders to put in her coffee to rehabilify her to me again.

mose wrinkly

p s i will pay you late saturday night or early monday morning

Dr. D. was delivering a young mother, the first confinement. Progress was a bit slow but otherwise normal. The to be father was agitated very much, "suffering severely," asking questions repeatedly, trying to make up all he could for any previous short comings. Doubts and forebodings were written plainly on his face. After several hours the doctor, felt the need of a change of atmosphere for himself and the expectant mother, whereupon he kindly said, "Young man you go out into the fresh air and rest awhile, I have delivered a thousand babies without the loss of a father."

An old colored woman carried her fourteen year old daughter to a young doctor in his first year of practice. "Doctor, this is my daughter, Sarah. I think she has a tumor. I want to see if you can give her a little medicine to remove." The inexperienced doctor having been impressed by a statement of father Lewis of New Orleans, "that tumors in the colored race are as scarce as catfish in the Mississippi, concluded that a fibroid tumor was the diagnosis, and informed the fat, black obliging mammy that an operation was the only cure. "Yassah, thank you. I'll pay you Saturday." Four months later the daughter was brought back. By this time experience had taught the doctor a bit in diagnosis. The Saturday dollar was paid and arrangements made for the delivery of the tumor. The date of tumor maturity arrived. The call came as the doctor was sitting down to lunch. It was urgent. He rushed along. When he entered the room, the wayward fourteen year old girl was sitting in the middle of the floor on a quilt with another drawn around with a big plate of pork, beans, molasses and bread eating away. The hungry doctor spoke rather short to her for calling him so far ahead, whereupon she kinder sniggered, and rolled the cover back to expose the fat chubby baby and replied, "I was just eating my dinner while I was waiting for you to come and cut de cord."

ROBERT H. BRUMFIELD, M.D., F.A.C.S.

General Surgery and Urology

McComb, Miss.

DR. BOLIVAR SMITH

On July the 12th the following program will be rendered in honor of the late Doctor Bolivar Smith. The name Smith may be common, but there was not a cell in the body of this one but that was sound and select. Every atom was charged with service, with love, and with honor in every human relation. He was the good, the true and the helpful neighbor. A safe and a faithful practitioner, a progressive citizen, a friend that gave inspiration, activated love and compelled respect. Doctor Bolivar Smith, the really great physician, the beloved practitioner, the essence of honesty in its broadest sense, is yet and will be a source of inspiration to every one who knew him.

Invocation by Rev. Pink Lunsford, Hackleburg, Ala.

Quartet.

Eastern Star, represented by Miss Lula May Bolton.

Laity, represented by W. C. Brackeen, Booneville, Miss.

Medical profession, represented by Dr. W. H. Anderson, Booneville, Miss.

Solo by Claude Box.

Bay Springs Masonic Lodge, represented by James C. Ardis, New Site.

Robert G. Simth Masonic Lodge, represented by M. T. Searcy, Booneville, Miss.

Mississippi Masonic Grand Lodge, represented by Simon Rubel, P. G. M., Corinth, Miss.

Shrine, represented by Hon. Floyd Cuningham, Booneville, Miss.

York Rite Masons represented by W. H. Carter. P. G. M., Columbus, Miss.

Scottish Rite Masons represented by Tom Q. Ellis, P. G. M., Jackson, Miss.

Prayer by Rev. E. H. Cunningham, Corinth, Miss.

Which three English words in common use and all beginning and ending with the same letters are pronounced exactly alike and have an entirely different meaning?

MISSISSIPPI STATE MEDICAL ASSOCIATION
and
COMPONENT SOCIETIES

Fractures of the Upper End of the Femur With Particular Reference to Their Treatment*

W. H. PARSONS, M.D., F.A.C.S.
Vicksburg, Miss.

The steadily increasing frequency of fractures has made this subject one of major interest. Improperly handled any fracture is certain to result in unnecessarily increased economic loss, will leave as its legacy inferior functional results and may, in certain instances, prove lethal.

The mistakes of the obstetrician are concealed by a woman's skirt, the general surgeon's errors are covered frequently by six feet of earth, but the individual who suffers a fracture and, through misdirected therapy gains deformity, like Banquo's ghost, will stalk about to haunt us.

I propose at this time to limit my remarks to a brief consideration of fractures of the neck of the femur, or what may be termed intracapsular fractures of this bone. There are few lesions more fraught with disaster. Of not infrequent occurrence and encountered most often in those of advanced years, it quickly becomes apparent that such an injury is always of great significance. If the surgical literature is to be relied upon, poor functional results are the rule rather than the exception and death not rarely mercifully closes the scene. I say "mercifully" advisedly for the fashion in which these poor victims are usually treated, and the end results achieved, all too often leave many to survive only to wish that they were dead.

On any active surgical service intracapsular fracture of the femur will be encountered at rather regular intervals. There are those who hold that the care of fractures should be relegated to the orthopedist—that is, one whose practice is limited to diseases or injuries of the osseous system. To that view I do not personally subscribe. The occasional case may need to be referred to one who has especial interest in, and experience with, that particular lesion but my own feeling is that one properly trained to do general surgery should be able adequately to care for broken limbs. That patience and skill are required no one would deny, but equal patience and skill are necessary to properly resect a colon or amputate a breast. And in passing I would say that while specialization has been and is a splendid accomplishment it can be pursued to absurd lengths. We are, I think, becoming surfeited with special societies and specialties and irrespective of one's personal opinion concerning these matters it is a practical fact that the great majority of fractures are handled by general surgeons—not orthopedists. For these and other reasons it is the author's opinion that a Surgical Section, such as ours, should embrace on its program a consideration of fractures.

In my personal experience in the last six hundred and eighty-five fractures encountered and covering a period of seven years, fracture of the neck of the femur occurred in fourteen instances. The recognition of the malady is not generally difficult. The classical evidence of such a lesion need not be repeated. Properly taken x-ray films will establish the diagnosis beyond doubt. It is wise to have an adequate number of exposures made, **including lateral views**, and the interpretation of the films should be by one competent in this particular field. Here, as elsewhere, it is highly important to recall that a history of violent trauma is not essential to extensive injury. There are now actively functioning agencies, sponsored by such individuals as Bancroft, who are attempting to educate both the public and the profession concerning the emergency care and the transportation of individuals suspected of having suffered possible fracture. These efforts need to be encouraged and should receive the vigorous support of the members of this section.

Once the diagnosis of fracture of the neck of the femur has been made the decision as to the proper treatment transcends in importance all other questions pertaining to the malady. The distinguished orthopedist Whitman, quite some years ago, advocated certain maneuvers consisting in extension, abduction and inward rotation of the limb, with then immediate immobilization by application of a proper plaster cast. It is necessary that the cast extend from the costal arch to the toes of the affected side and to below the knee of the sound side. That even so complete a cast, applied by the most expert, will actually immobilize the fragments is I believe open to doubt, and I am inclined to suspect that many failures to obtain union are due not to a poor vascular supply of the proximal fragment but to failure to maintain exact anatomic restitution of the fragments. Campbell advises that this cast remain eight weeks. It is then removed, the parts x-rayed; if all is well, a hip brace is applied and the patient is lifted to a wheel chair. At the end of the third month the joint at the hip is unlocked and the patient may sit in a chair. At the end of four months, if progress is satisfactory, walking with crutches and brace is permitted and by the end of six months crutches may be discarded. In favorable cases the brace may be left off by the end of the eighth month. Speed writes that he and his colleague Campbell have obtained solid bony union in 53.3 per cent of their cases. All were treated in the manner just described. The mortality rate was 12 per cent.

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*Chairman's Address presented before the Section on Surgery at the Sixty-Ninth Annual Session of the Mississippi State Medical Association, Greenville, May 5, 1936.

So far as I have been able to determine from the literature at my disposal, and from personal inquiry, essentially all American orthopedists and the vast majority of general surgeons have followed the suggestions of these two brilliant American orthopedic surgeons. I doubt greatly that any have had superior results with the method than Whitman and Campbell, for they represent the truly expert in this particular field. If this assumption be true, more than one in ten of the individuals so treated will die and of those who survive the rigors of what Hendon has termed "a plaster sepulchre" one half will receive for their pains non-union.

A prognosis so gloomy leaves much to be desired. I do not care to enter into a discussion of the reasons for the frequency of non-union. But it does appear remarkable that the profession has so calmly continued almost universally to treat intracapsular femoral fracture in a manner that even in the hands of the masters is so disappointing. My own experience with the Whitman method yielded about the results achieved by others. In spite of every care that I could use many elderly patients had bed sores, pulmonary infection and suffered various hardships. It was deemed, therefore, advisable to attempt to improve the results.

The English orthopedist, Groves, has written that there should be one of five good reasons for deciding to do an operation on any given fracture:

1. To hasten recovery.
2. To obtain more perfect union.
3. To prevent deformity.
4. To cure mal-union.
5. To correct non-union.

This author, in 1921, held that in dealing with fracture of the surgical neck of the femur that the operative method should be used in all but the very aged or feeble. He advised that through a long incision a bone graft be obtained, the base of the great trochanter be exposed, the fracture reduced by proper manipulation and the graft then driven through the bone, passing through the center of the line of fracture and entering the femoral head.

Later certain important modifications in the procedure were made by Hendon of Louisville, Ky., and before this Association in 1933 Hendon discussed this problem and described the operation he in part devised, wholeheartedly advocated and had successfully used in more than fifty cases.

Hendon, several years ago, concluded that the open operation could be made exceedingly simple and could safely be used even in the aged and feeble—the very type of individual likely to die if treated by the Whitman technic. Hendon had prepared beef bone pegs of appropriate sizes and lengths, the pegs being square in shape, a matter of practical importance. These pegs, or as Hendon terms them, keys, are sterilized by immersion in carbolic acid. A small incision is made exposing the base of the great trochanter, by adequate manipulation the fracture is reduced, a small drill hole in proper direction is made and the beef bone key is driven in place traversing the fracture lines and entering the femoral head. The key is measured on the x-ray film of the fracture previous to surgery so that exactly the right length of bone is driven in place. The wound is closed by through and through sutures (no retentive appliance is necessary) and the patient is returned to bed. The patient may easily be cared for since their movements are not restricted and they may be allowed in a wheel chair by the fourteenth day. The patient may, in the experience of Hendon, be about on crutches in from three to four weeks.

As previously indicated, I became dissatisfied with the results obtained by treating these patients through either entombing them in sepulchres of plaster or else crucifying them upon the cross of splinting, suspension and skeletal traction. Accordingly, I visited Hendon's Clinic and observed a considerable number of the patients on whom he had operated. So far as I could determine, the results obtained were actually those reported on many occasions by that surgeon. Since that time I have followed precisely the regime suggested by Hendon with quite satisfactory results.

A total of seven patients have been operated upon, employing the technic described by Dr. Hendon. These individuals varied in age from sixty-four to eighty-four years. There was one death, which I think might easily have occurred in the same space of time had the patient received no treatment. I wish briefly to discuss this mortality.

The patient was a female, more than seventy years of age, who was known to have inoperable carcinoma of the colon. She was in exceedingly poor condition and presented the picture of advanced malnutrition. She fell from her bed and sustained a fracture of the neck of one femur. A few months before this injury occurred she had suffered a cerebral hemorrhage with paralysis of one side of the body. Consequently her life expectancy at best was quite limited.

Employing local anesthesia and without technical difficulty, a peg was inserted and the patient showed no especial postoperative reaction. Death, however, occurred four days later. This mortality, I think, may fairly be disregarded.

The remaining six patients obtained excellent results. Following surgery, they presented little evidence of shock, the average period of hospitalization was twenty-one days and all were permitted out of bed at the end of twelve days. Union was obtained in each instance. The patients were permitted to walk with the aid of a crutch at the end of six weeks and begin bearing weight on the limb at the end of twelve weeks.

As typical of this series, the following synopsis of a case report is offered. A white male, sixty-four years of age, fell from a ladder and fractured the neck of the left femur. He was brought to the hospital and on the following day, under local anesthesia, a beef bone key was inserted. On the tenth postoperative day the patient was permitted out of bed and on the sixteenth postoperative day he returned to his home in Memphis, Tenn. The patient reported later by letter that at the end of six weeks he was able to use crutches and six months from the date of the accident he was sufficiently well that he travelled from Memphis to Flint, Michigan, purchased an automobile and drove it to his home.

Seven consecutive patients seen preceding those just discussed were treated by reduction of the fracture with application of a plaster cast. The average period of hospitalization in this series was fifty-four days, one died and satisfactory union with good functional results were obtained in five.

SUMMARY

I hold no brief, and offer no defense, for any particular individual or method of treatment for intracapsular fracture of the femur. Hendon's several contributions to this subject have been greeted in the main with derision and his results with cold contempt. Yet Hendon is able to report a total series of eighty patients so treated, with but eight deaths and with non-union in only one patient of the seventy who survived.

My own interest in this subject lies solely in determining the preferable mode of treatment, and as for me, I am convinced that in my hands at this particular time the method advocated by Groves and Hendon serves best the patient's interest.

Some Common Fungus Infections of the Skin*

KARL O. STINGILY, M.D.
Meridian, Miss.

The most common skin diseases in this section of the United States are those caused by the fungi. The climatic conditions of the South are most favorable for the parasitic plants which cause the infections. In the past this class of skin diseases has been considered of only minor importance, but due to the annual economical loss, due to incapacitated workmen, especially among our factory class and athletes, it is now being considered in its full importance.

All of the skin diseases and the fungi capable of producing them are too numerous to mention in this paper. Therefore, I shall present those infections seen most commonly, namely, those caused by the genus Trichophyton. This group attacks only the horny layers and the keratinized structures of the skin. There are no portions of the skin exempt, but the usual sites of infection are the scalp, beard, inguinal region, hands, feet, and nails, the last three named comprising eighty-five per cent of the cases seeking medical aid.

On the hands and feet are seen three main types somewhat overlapping each other, but distinct enough to discuss separately. They are:

1. The acute vesico-pustular type.
2. The chronic intertrigenous type.
3. The hyperkeratotic type.

The acute vesico-pustular type, most often seen on the hands, but quite often on the feet, manifests itself first on the fingers and toes in the tissues surrounding and posterior to the nails; also on the pads. The infection spreads rapidly and in from 24 to 48 hours the entire hands and feet may be involved. The first lesions are pin-head size vesicles seen through the outer layer of the skin and in the corneous portion appearing as deep veiled vesicles. Their content is serous at first, later becoming purulent and, on rupturing, a white tinted sticky fluid is exuded. Itching is intense and patients seen at this stage usually present many highly inflamed areas which are covered with exudative material. Secondary infections with pyogenic bacteria usually follow and in the course of a few days the entire hands or feet are covered with highly inflammatory boggy masses of infection. The tissues immediately surrounding the nails are swollen and give the nails the appearance of regression. Pus is seen to exude from the borders of the nail beds. Examination of the top of the vesicles under the microscope, using from 10 to 20 per cent potassium hydroxide to dissolve the scales, will reveal the fungi in abundant quantities. If cultures are to be obtained the above portion of the vesicle should be used. In allergic individuals we often see this type of case progress to a generalized eruption over the entire body. This is caused by an allergic process and the active principal is called tricophytin. The lesions in this condition are situated about the hair follicles and appear as red, swollen papules or macules. The organism cannot be demonstrated in this type except in the primary lessions. I have seen this type of eruption produced by treating the early lesions with too strong chemicals. The patients showed no susceptibility to the chemical used, as determined by patch testing.

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*Read before the Section on Medicine at the Sixty-Ninth Annual Session of the Mississippi State Medical Association, Greenville, May 6, 1936.

In the less fulminating type the tendency is to spontaneous regression of the lesions, but there is usually left a scale or scales at the site of each vesicle. These spread by peripheral extension and examination of the lesions will show small overhanging scales under which the organism can readily be demonstrated. The early fulminating type is often mistaken for scabies, particularly if there is a "tid" eruption. Lesions are commonly found between the fingers, on the wrists, on the arms, under the breasts, and in the axillary folds. In cases where the feet are the primary foci, the thighs and buttocks are commonly the site of the "tid" eruption. At the time of these fulminating cases the contagiousness of the infection seems to be at its height and several members of a household, or groups of people working in close contact with one another, may become infected. Recently, in one of our factories in a group of young girls, we experienced a small epidemic. The quarters these girls worked in were warm and filled with steam, an ideal invironment for the proliferation of the fungi.

It is not uncommon in these cases to have mild constitutional symptoms with a mild degree of fever, lassitude and adenopathy.

In some cases, all the lesions heal, with the exception of a few. These remaining become boggy, then dry, and present fine scaling, with peripheral overhanging scales. Untreated, they may last variable lengths of time and be the site of reinfection. This type of lesion is usually located about the wrists, just anterior to the heel, and on the dorsum of the fingers. They may progress to eczematoid eruption, in which weeping is a most annoying feature. Usually small vesicles may be demonstrated within or immediately surrounding these lesions.

The chronic interdiginous type commonly seen on the feet, less often on the hands, are edematous lesions covered with macerated epidermal tissue. The lesions are always moist. Itching is usually present. Vesicles are always demonstrable, either in the lesion proper or immediately surrounding it. Extension is peripherally and may involve a considerable portion of the sides of the toes, but usually involves the dorsal or volar portions of the foot. Large vesicles usually form in advancing cases just under the toes. Secondary infection is common. In advanced cases the under surfaces of all of the toes may be involved and by erosion deep lesions develop, resulting in inguinal adenopathy. On the dorsum of the foot or hand the lesions are somewhat drier and present much more scaling. The entire palm or sole may become involved in a single or multiple lesion. This type lies dormant, or causes only slight inconvenience, for considerable lengths of time—sometimes over a period of years. When the patient becomes debilitated for any reason, they manifest themselves as very rapidly spreading infections. In patients with diabetes or circulatory impairments they should be given most serious consideration. I have had an opportunity to treat a case in a young lady with Raynaud's disease in which the toe became gangrenous; also in a diabetic in which both ankles and feet were in great danger of gangrene.

There is very little damage and discomfort from the hyperkeratotic type. The lesions are soft, large plaques which desquamate readily by brisk rubbing. These are most often seen on the feet, on the inner surface of the great toe, on the heel and under the transverse arch. On the hands they are seen on the thenar and hypothenar eminences, also on the inner surface of the thumb. Their most important consideration is that they serve as foci of infection.

NAIL INFECTIONS

There are essentially two types of nail infection and these can be readily differentiated, not only from the infection present in the other parts at the time, but by the striking characteristics of the nails themselves.

Those nail infections occurring at the time of acute vesicular eruptions, or just following, begin in the posterior portion or on the sides of the nails. The nail at first becomes crinkled and striated, later losing its luster and separating from the nail bed in the direction of its growth. The new nail, as it pushes the old nail off, presents ridges or waves with the convex surface pointing distally. The new nail, in these cases, if one does appear, is permanently damaged and shows signs of pitting or striation.

Those lesions which result from old infections begin on the free margin of the nail and sometimes on the lateral borders. The nail is thickened and much more lusterless than the above. On lifting the nail and scraping its under surfaces it will be seen to be entirely detached and its bed transformed into a mass of friable white or dirty white scales. In the early lesions of this type the convex surface of its line is pointed proximally; later, they may present an irregular outline. On removing the nail the bed is dry and covered with linear remnants of nail. The crinkling and folding, as well as pitting, in this type, run parallel with the nail.

TREATMENT

In all fungus infections the use of the heavy metals is indicated. Of the heavy metals most commonly used, and perhaps the most effective, mercury heads the list. The tendency among most of us is over-treatment and the application of too strong a fungicide. Whitfield's ointment is too irriating and defeats its purpose. A half strength Whitfield's, with the addition of one per cent thymol, makes a very effective ointment. In acute cases, especially those with secondary infections, an ointment should not be used, as it does not reach the site of infection and only tends to seal in the moisture so vital for the proliferation of the organism. We regularly employ in these cases compresses or soaks, consisting of equal parts of aluminum acetate and boric acid, 1 dram to the pint of warm water. This solution is drying and as soon as proper regression of the lesions occurs, we use an ointment consisting of not over 2 per cent salicylic acid and mercury salicylate with 1 per cent thymol in a base of either white vaseline or preferably aquaphor. By first applying a saturated solution of sodium hyposulphite and allowing it to thoroughly dry, the ointment is rendered more effective. This type of treatment is always indicated in the interdiginous types. The above ointment serves very admirably in cases of isolated ringworm of the body and in tinea cruris. For the scalp stronger ointments are used and as much as 6 per cent salicylic acid and 12 per cent sulphur are regularly employed. In obstinate cases of fungus infection of the hands and feet I know of no better method of treatment than x-ray. We use from 125 to 175 r units at 10-day intervals, and usually three or four treatments suffice. All treatment of this class is done through 0.5 m.m. of aluminum.

Gloves should not be worn nor should the lesions be bandaged. Worse still is the use of rubber gloves by housewives. The shoes should be placed in the sun with the inner surface exposed. A powder consisting of sodium hyposulphite, 15.0 grams, and zinc oxide, 60.0, is used as a dusting powder each night to prevent reinfection. Articles, as brief cases, fountain pens, drawer handles, door knobs and the steering and shift levers of cars, should be thoroughly sterilized. The hands and feet must be kept as dry as possible. Quite often we employ the use of mineral oil for cleansing purposes and never allow the use of soaps.

In tinea infections of the nails it is always necessary to remove the nail. We use 20 per cent potassium hydroxide after greasing the tissues surrounding the nail with vaseline. The nail bed is then soaked with the aluminum acetate solution for two or three days constantly—then ointments of 2 to 4 per cent salicylic acid and mercury salicylate are applied twice daily. Better still, is x-ray applied to the denuded nail bed.

Sinus Disease and Nasal Allergy*

ROBIN HARRIS, M.D.
Jackson, Miss.

The wheel of fortune goes 'round and 'round;
The older we get, the faster it goes,
It does not stop—

Six years ago I defined allergy as an inherited biological predisposing tendency to hypersensitiveness to foreign proteins. In a recent panel discussion in Saint Louis, Bronfenbrenner described the response known as allergy as a combining of antigen and antibody, yet your patient may inherit the predisposing tendency to allergy and carry it all of his life without having an attack known as allergy. For an actual occurence of the reaction in question, the antigen must enter the tissues through a break in the continuity of the skin or mucous membrane. The one exception so far as I know is poison ivy, of which this paper has nothing further to say.

The differential diagnosis between nasal sinus disease and nasal allergy was fifteen years ago frequently not made. Thousands upon thousands of allergic people have been operated upon under the delusion that the surgeon was operating on pure nasal sinus disease. The improvement was marked in most instances for the first few months, and then his symptoms came back again, and in many instances, worse than before the operation. The pendulum at that time was swinging far out on the operation side; about six years ago the pendulum swung far to the opposite side and many excellent men, especially the allergists who were learning something about immunology, preached with tears in their eyes for no operation whatever on the nose in any case of any type of allergy. The pendulum now is swinging to the settling point and Hansel, in his new book just off the press, strongly recommends operation for pathology that will not be corrected by desensitization methods; a badly deviated septum must be corrected by operation before protein therapy can be expected to do its best work; markedly enlarged middle turbinates must be in part or totally removed, depending on the pathology present. Hansel also stated that: "Allergic patients should not be subjected to operative procedures, even to tonsillectomy, during the hay-fever season." This is also most important in the patient who is predisposed to allergy but who has never had an attack. All of us have seen about one patient who had an operation (especially about the upper respiratory tract) and then for months or even years, had severe asthma or hay-fever: also this patient had never had the slightest sign of this condition prior to his operation. Such cases studied carefully will prove that the patient predisposed to allergy will not have symptoms of such until the antigen enters the system parentally.

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*Read before the Section on Medicine at the Sixty-Ninth Annual Session of the Mississippi State Medical Association, Greenville, May 6, 1936.

The symptoms of sinus disease and nasal allergy are sometimes quite similar. They are so similar that in most instances where the diagnosis is doubtful if a little time, a few weeks of watchful waiting is taken, it will usually be found that the trouble is one of allergy uncomplicated or allergy complicated by secondary paranasal sinus disease. Pain in the face in nasal allergy is quite common, pain in sinus disease except pressure pain of the acute stage is an extremely rare occurence. A few nasal smears and a few days of careful watching will practically always establish the true diagnosis and keep clear the conscience of the rhinologist so that he may sleep well and be satisfied that he has treated his fellowman on the square by not operating unnecessarily. I once heard the late Doctor R. C. Lynch, one of the greatest rhinologists of all time, say that polyps in the nose established the diagnosis of nasal sinus disease. If Doctor Lynch were living today, I believe that he would agree that mucous polyps in the nose establishes the diagnosis of allergy; certainly, that is the conclusion I have come to.

We see dozens of patients complaining of pain in and about the ear on one side only. Once I saw a patient, a doctor, an eye, ear, nose and throat man, who came to me complaining of boring pain in and about his right ear. It had been there six weeks, he thought he possibly had a cancer in his head. I cocainized the ganglion and told him to come back the next day. In about a week I saw him at the hospital and asked him why he had not come back and he said the pain disappeared that night after the treatment and he saw no need to come back. Twelve months later he came back with the same cancer. This incident is related only to suggest that there are so many people complaining of this one sided slight headache, and since it comes in cycles perhaps it is allergy, not exactly of the nose but relieved by nasal applications. Occasionally this condition is so severe that the spheno-palatine ganglion must be injected with novocain for relief. The injection is easily made and usually relieves this quite promptly.

There is still such a thing as purulent nasal sinus disease and when uncomplicated by nasal allergy, and when the pathology is so marked that intranasal treatment plus sinus irrigation does not cure, surgery properly done by removal of every vestige of soft tissue in the sinus operated on will affect an absolute cure provided there are no other sinuses involved. If there be other sinuses involved that do not show at the time of the first operation but do later on prove to be beyond repair by nature, with the help of the rhinologist, the same statement holds. In other words, gentlemen, pure uncomplicated sinus disease, badly diseased but properly operated upon, makes a well patient. I have scores of records to prove it; I have scores of living patients who will vouch for it.

The problem, therefore, resolves itself into making the correct diagnosis and never operating on your patient until the patient has been observed sufficiently long to be sure that you are doing nothing but that which will help your patient.

DISCUSSION

Dr. George W. Owen (Jackson): In most any discussion of the subject, "Sinus Disease and Nasal Allergy," the question as to which is primary may be presented. There are many strong advocates of sinus disease being primary. There are equally strong advocates of nasal allergy being primary, and sinus disease secondary. Regardless of which is the chicken, and which is the egg, the fact still remains that we have to deal with sinus infection. The fact also remains that we have to deal with nasal allergy, and many times we have both in the same patient.

Dr. Harris has made some valuable suggestions, particularly to our nose and throat friends. It is greatly to be hoped that they will take sufficient time to differentiate nasal allergy from sinus disease. As he has stated, this may be done by taking sufficient time, and making repeated nasal smears. One smear from the nose is frequently not sufficient to demonstrate the presence of eosinophils. Repeated smears will reveal anywhere from ten to ninety per cent eosinophils in the discharges of the nose of the allergic individual. You may make a smear from the nose today and find no eosinophiles. Tomorrow a smear made from the same nose will reveal perhaps fifty per cent.

It is entirely possible that too little consideration is given to the time at which nose and throat surgery is done. This lack of consideration, particularly in families having an allergic history, may be responsible for the apparent increase in the allergic diseases.

With regard to the diagnostic value of mucous polyps, I should like to give you the experience of Kern and Schenck in 1933. These two men found that all patients with mucous polyps had a personal history of allergy. Polyps are extremely common in chronic and perennial allergic individuals. They are comparatively rare in the none-allergic diseases of the nose. When mucous polyps are found you may be reasonably sure that the patient is of the allergic trend.

Regarding the question of doing surgery upon an allergic nose, there certainly must be some rational mid-ground upon which this could be done. I am quite sure that in a case of perennial hay fever with a badly deviated septum, we may expect far better results to have a submucous resection, and carry through with the allergic management after this is done. The same could be said of any other obstructive lesion of the nasal cavities. At times it is even advisable to open an antrum. In general, however, I should say that conservative management should be instituted and tried for a reasonable length of time before advising any radical surgery. In fact, radical surgery in the nose, on the whole, is certainly to be frowned upon.

With regard to the treatment of these conditions, I should say that if the treament is directed entirely to the nose that we are doomed to failure in many cases. On the contrary, if we confine our treatment wholly to the extra-nasal factors, and disregard the nose, we are again going to fail in a large number of cases. If we would have our best results, we must consider both the extra-nasal factors and the nasal pathology itself, at the same time, giving attention to both.

With regard to the extra-nasal factors, please permit me to make the following statement. Quite a few men at this time are presenting rather conclusive evidence that in allergic individuals there is an underlying toxic state. This factor must not be overlooked in the handling of any of the allergic conditions. We have been accustomed to look upon the contributing factors as inhalants, foods, endocrines, drugs, etc. Let us not overlook this toxic factor, which may be coming from infected sinuses themselves, or from infection of other sources. Sources of toxemia are too numerous to even mention at this time, but they must not be overlooked. It is my personal feeling that the maximum of success is obtained in these patients only through careful study of the patient as a whole, with due attention to the nasal, as well as the extranasal factors. Complete physical examinations should be made in all cases, and many times laboratory assistance must be used.

Dr. Harris has indicated in his paper what to me is the most admirable trait which any nose and throat man might develop, namely, conservatism. If there is any place in medicine where conservative treatment in handling of a case is indicated, it is in those cases of nasal allergy complicated by nasal pathology.

I have enjoyed Dr. Harris' paper, and wish to thank him for the privilege of discussing it.

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EDITORIALS

PHYSICIANS AND HOSPITALS

In the tenth annual report of the Hospital Section of the Duke Endowment, published in December, 1935, are some interesting figures on "Conditions and Trends" of distribution of physicians and general hospital beds. Thoughtful consideration may well be given to the statement, " . . . . for it must be reiterated and remembered that the central object of the Hospital Section is not hospitals in themselves, but hospitals as an important element and influence in improving the medical care of the people. The approach is the hospital; the object good medical service.

"The basic element in medical service is the professional element, more especially the physician. The strategic importance of the hospital in providing medical care (and especially is this true for the smaller communities, the rural communities) is not in the number of beds which it provides for patients nor the number of patients which it treats during the course of a year, but in its influence upon the number and type of physicians that serve the community, the ten per cent of the seriously ill who require hospital care and the ninety per cent of the less seriously ill who are cared for in their own homes and in physicians' offices."

A table gives the distribution of physicians in 1925 and 1934 for the United States and for each state, with changes in the number of physicians in proportion to population for the country as a whole and for each state within the nine-year period. The table lists the states in the order of the state with the largest number of physicians in proportion to population to the state with the smallest number, and indicates the change in the rank of each state based upon the proportion of physicians to population that has taken place since 1925.

Heading the list is the District of Columbia. It was first in 1925 and in still first in 1934. In 1925 it had 147,010 physicians and in 1934, 161,359, a gain of 14,349. The population per physician in 1925 was 772, in 1934, 786, a gain of 14 per physician.

Mississippi and our adjoining states are given in order below:

TENNESSEE: Rank 1934, 28th; 1925, 18th; physicians 1934, 2,970; 1925, 3,128; loss 158; population per physician 1934, 903; 1925, 775; gain 128.

ARKANSAS: Rank 1934, 35th; 1925, 24th; physicians 1934, 1,890; 1925, 2,212; loss 322; population per physician 1934, 994; 1925, 838; gain 156.

LOUISIANA: Rank 1934, 38th; 1925. 34th; physicians 1934, 2,127; 1925, 1,991; gain 136; population per physician 1934, 1,021; 1925, 944; gain 77.

ALABAMA: Rank 1934, 45th; 1925, 43rd; physicians 1934, 1,525; 1925, 1,702; loss 177; population per physician 1934; 1,352; 1925, 1,052; gain 300.

MISSISSIPPI: rank 1934, 49th; 1925, 41st; physicians 1934, 1,525; 1925, 1,702; loss 177; population per physician 1934, 1,352; 1925, 1,052; gain 300.

While there has been only a slight decrease in the proportion of physicians to population for the United States as a whole during the nine year period, from one physician for 772 people in 1925 to one physician for 786 in 1934, in Mississippi the decrease was from one physician for 1,052 people to one physician for 1,352 people. Mississippi has the most limited medical profession in proportion to population of any state in the Union.

Apparently the movement of physicians is still away from rural and agricultural states and into urban and industrial states.

When the distribution of hospital beds is considered, it is found to run more or less parallel with the distribution of physicians. Mississippi is the 49th sate in the number of hospital beds in proportion to population, with 1.4 beds per 1,000 population and 701 people per available hospital bed.

That there may not be a rush to provide more hospital beds for the people of Mississippi in order to meet the implied need, it should be remembered that in 1934, for which the above figures are given, according to records of the Mississippi State Hospital Association, probably less than 35 per cent of available general hospital beds were occupied.

From all of the above it is evident that there is a discrepancy in Mississippi between physicians, hospitals and patients. Some way should be provided to bring them together. A definite plan is needed. More sick people should have medical and hospital care. Why not devote one meeting of your society this year to discussing and planning ways and means?

EXCHANGE OF ESSAYISTS

In the past few years there have been sporadic efforts by some medical societies of the state to exchange essayists and last year Dr. J. R. Hill, then president of the Mississippi State Medical Association, recommended an exchange of essayists between the component societies of the State Association. There is much to commend the plan. We, of Mississippi need to know each other better. There are members of all societies well qualified to write and present worthwhile and practical papers. Younger members should be encouraged and given experience on their feet. And the fact that a man practices in the country should not cause him to hesitate to present a paper before his city confreres. It has been the experience of some of the larger societies that it is sometimes difficult to get the member from the small town to accept a place on the program but when, after considerable urging, he agrees, his presentation is often outstanding. Out-of-state essayists bring valuable messages and help to keep members of a society in touch with advances in the medical centers of the country and should be invited occasionally, but, after all, an exchange of ideas among those with problems which are similar, a discussion of like practice does more to maintain interest in meetings. It is to be hoped that the exchange of essayists among our societies within Mississippi may increase.

FROM OUR PRESIDENT

To the Medical Societies and the Profession of Mississippi:

My dear Doctors:

It is my desire to visit every medical society in this state, this year, if it is possible for me to do so. I am very anxious to dedicate my services to the very best of my ability, in every way possible, to help the medical profession solve the problems that are mutually ours.

To this end, I would like for all the societies who are contemplating programs in which they wish to have me take part, to advise me as early as possible, in order that I may arrange my itinerary, not to conflict, too seriously with my own professional duties and with other engagements with various medical societies over the state.

Immediately upon receipt of this letter, I hope you will inform me of the regular times and places of the meetings of your society, and which of these you would prefer to have me attend.

With every good wish, I am,

Sincerely yours,
HARVEY F. GARRISON, President.
Mississippi State Medical Ass'n.

OUR SECREARY

Dr. Dye is at home now and is improving with remarkable rapidity, but he is still unable to take care of his correspondence. He is highly appreciative of the many expressions of interest on the part of his friends all over the state and as soon as he is physically able, he will answer them personally.

The entire family is deeply grateful for the many kindnesses shown him throughout his serious illness.

MARGUERITE DYE
Clarksdale, June 12, 1936.

REPORT OF COUNCILOR OF FIRST DISTRICT

The Clarksdale and Six Counties Medical Society and the Delta Medical Society compose the first district.

Statistics show the following:

In the Clarksdale and Six Counties Medical Socienty:

Counties	Active Physicians	Inactive Physicians	Paid-Up Membership
Coahoma	32		22
Tallahatchie	21	1	17
Tunica	9	1	6
Quitman	12	4	7
Bolivar	5		
	79	6	52

In the Delta Medical Society:

Counties	Active Physicians	Inactive Physicians	Paid-Up Membership
Bolivar	37	6	52
Humphreys	13		8
Leflore	40	3	20
Sunflower	32		17
Washington	36		27
	158	8	98

Each society holds its semiannual meetings with an afternoon program and an evening entertainment, which is varied. The programs have been instructive and the interest manifested and attendance recorded show splendid spirit and cooperation. We have tried faithfully and long, directly and indirectly to bring into the fold some who have never joined the rank and file, and have also tried to rescue the backsliders and those who have fallen from grace. We expect to continue the missionary service, hoping to restore the lost and that all prodigals will return.

(Signed) J. W. LUCAS,
Councilor, First District

REPORT OF COUNCILORS OF SECOND DISTRICT

In DeSoto County eight of the nine physicians are members of their local medical unit, which gives it a percentage of 90.

The North Mississippi Medical Society is composed of members from seven counties as follows:

Counties	Members	Non-Members	Membership Per Cent
Benton	3	2	60.0
Lafayette	14	2	87.5
Marshall	7	4	64.0
Panola	11	3	80.0
Tippah	7	2	77.0
Union	8	4	66.5
Yalobusha	9	4	70.0

There are five retired physicians within the bounds of the society. For the entire society the membership is 70 per cent.

The Tate County Medical Society has 100 per cent membership. All eleven physicians are members. There is one retired doctor over eighty years old.

Several of our members have died since my last report (note "In Memoriam," of Transactions).

We shall continue to be diligent in our efforts for the promotion of organized medicine in this state.

(Signed) L. L. MINOR,
Councilor, Second District.

REPORT OF COUNCILOR OF THIRD DISTRICT

The general conditions in the northeast are generally good and the doctors are all in fine spirits and most of them are speeding new cars and are going well dressed and holding their lips up.

Our society, the Northeast Mississippi Thirteen Counties Medical Society, comprises the third district. We hold quarterly meetings, in March, June, September and December, and all of the counties either have staff meetings or county meetings monthly.

I have not learned of any disturbance in the ranks of the profession or of any suits this year.

Our membership is not as large as it should be but it is better than the average for the past years and interest is good. Our meetings are usually attended by more than 100 members and an excellent program is arranged each time.

A report of the proposed plan of practice contract for the rehabilitation of farmers was made. This the society did not accept. A resolution was passed condemning the proposed plan and it was asked that the resolution be read to the State Association.

(Signed) R. B. CALDWELL,
Councilor, Third District.

REPORT OF COUNCILOR OF FOURTH DISTRICT

The district has been more inactive for the past year than at any time during my incumbency. Our meetings have been interrupted by various causes so that only two meetings have been held. We have not enlisted more than 50 per cent of the eligible doctors in the district. Try as I have to increase our membership and interest, the results are discouraging.

I have previously called attention to these facts and suggested the advisability of a rearrangement of the counties in the district in the hope of securing added interest and membership.

This I am putting up to the Council for advice and instructions. I need your help.

In addition to the foregoing facts and conditions, the County of Holmes is petitioning to be released from the district and granted a charter for a separate county society. The counties of Holmes, Grenada and Montgomery have kept the Winona District Society alive and if Holmes should withdraw, and I will not object to this request, it will leave us with practically a dead district.

In other respects we are harmonious and agreeable. Our meetings are pleasant and profitable. There are no damage suits pending against any of our members.

(Signed) T. J. BROWN,
Councilor, Fourth District.

REPORT OF COUNCILOR OF FIFTH DISTRICT

This district is divided into three medical societies, namely:

The Central, composed of the Counties of Hinds, Leake, Madison, Rankin, Scott, Simpson and Yazoo. This society has held regular monthly meetings with a social hour preceding each scientific session. The scientific programs have been well arranged and the meetings have been well attended. A great deal of interest has been manifested by the membership and a splendid feeling has existed throughout the society. According to the roster of doctors, there are 194 eligible in the territory embraced by the society. The paid-up membership was 166 on April 20, 1936, making a percentage of 85-plus.

The Isaquena-Sharkey-Warren Counties Medical Society is composed of the counties hyphenated. This society has held regular monthly meetings which have been well attended. There is a social hour preceding each meeting and splendid scientific programs are always presented. Members of this society are very much interested and are doing excellent work. These three counties, according to the roster, have 56 available men. The paid-up membership, as of April 20, 1936, was 38, a percentage of 68 minus.

Claiborne County is the only county in my district that is not affiliated with other counties in forming societies. The roster of doctors indicates that there are six eligible men in this county. I am informed that four of these are members of the Claiborne County Medical Society and have paid their dues to the State Association. I have no information in regard to the activities of this society.

On the whole, this has been a splendid year for this district. There have been no law suits reported to me and the growth of the societies, especially of the Central Medical Society, has been most gratifying.

(Signed) W. H. WATSON,
Councilor, Fifth District.

REPORT OF COUNCILOR OF SIXTH DISTRICT

The sixth district is composed of the seven counties—Lauderdale, Newton, Neshoba, Winston, Leake, Kemper and Clark. Leake County has now united with the Central Medical Society and the remaining counties of this district are organized into the East Mississippi Medical Society, which meets four times a year in Meridian. These meetings are attended by an enthusiastic membership of 60 or 70 due to excellent papers and discussions and a banquet.

Several of the counties are also organized as separate county medical societies and have regular monthly or bi-monthly meetings.

The paid-up membership of the East Mississippi Medical Society is 79 out of an eligible group of 117, or a percentage of 67.

The physicians of Clark County seem to be somewhat divided, one having joined the East Mississippi Medical Society and several belonging to the South Mississippi Medical Society, I understand. There are quite a few physicians in that county, however, who do not belong to any society.

The membership by counties follows:

County	Eligible Members	Paid Members
Lauderdale	50	43
Newton	17	10
Neshoba	14	11
Winston	12	6
Kemper	12	8
Clark	12	1

The East Mississippi Medical Society suffered a distinct loss in the death of Dr. H. S. Gully.

There have been no law suits filed against physicians in this district during the past year.

(Signed) H. LOWRY RUSH,
Councilor, Sixth District

REPORT OF COUNCILOR OF SEVENTH DISTRICT

During the year that has just closed there have been no damage suits filed against members of the medical profession for malpractice. This is the second year that I have been able to make the report "no damage suits filed." Certainly times must be getting better. The fellowship is fine and more and more you hear the expression of "my fellow worker in the flesh" or "co-worker" used rather than "my competitor," and this is the way it should be. More and more we physicians are learning that by closer contact and fellowship among our members, the more we grow in usefulness in our communities as well as get more money for less work.

Our component society, the South Mississippi Medical Society, composed of the Counties of Jasper, Jones, Green, Perry, George, Forrest, Pearl River, Smith, Wayne, Covington. Lamar, Marion and Jefferson Davis, holds four meetings each year. The meetings are usually held in Laurel and Hattiesburg, but our September meeting this year was held in the splendid little city of Columbia. President Jack Gardner had an excellent scientific program and at night the doctors and their wives attended the banquet. More than 100 were in attendanct. We were honored by having Governor and Mrs. Hugh L. White as our guests.

All counties in my district have organized units and several of them are making application for charters at this meeting. There are 69 paid-up members. There is a possibility of 138.

There are quite a number of active physicians who are not paid-up members but we expect to continue working.

During the year our society, as well as all Mississippi, lost one of our most loved and useful members, Past President T. E. Ross of Hattiesburg, also Dr. B. F. Hand of Waynesboro.

(Signed) JOS. E. GREEN,
Councilor, Seventh District.

REPORT OF COUNCILOR OR EIGHTH DISTRICT

The eighth councilor district is well organized in its entirely. The Homochitto Valley Society still functions as a district organization for scientific and social purposes, while each component county has its individual local society as a unit of the state organization.

Pike County has a strong and well organized society and is doing good work with the aid of the Commonwealth Fund to assist it with guest speakers and essayists.

The Tri-County with a slight increase in membership has kept by unanimous vote its integrity as a component society and carries out a well balanced program.

There has been the usual spirit of harmony and good will throughout the entire district during the year.

(Signed) W. H. FRIZELL,
Councilor, Eighth District.

REPORT OF COUNCILOR OF NINTH DISTRICT

There have been no changes in the organizations of the ninth district during the past year.

Several new doctors have moved into Harrison, Hancock and Jackson Counties. In each instance they have joined their respective County Societies. A few have moved away.

The Harrison-Stone-Hancock Counties and the Jackson County Medical Societies continue to hold regular monthly meetings which have been well attended where good programs have been rendered.

(Signed) D. J. WILLIAMS,
Councilor, Ninth District

DIRECTORY AND CALENDAR OF MEDICAL SOCIETIES

Information is not complete. Secretaries of societies are urged to send in full data so that it may be known when the societies of the state meet; also the names of the officers directing their activities this year should be shown.

MISSISSIPPI STATE MEDICAL ASSOCIATION:

Seventieth Annual Session and Thirty-fourth Annual Session of the House of Delegates, Meridian, May 11, 12, and 13, 1937.

Adams County Medical Society: W. K. Stowers, Natchez, president; F. S. Dixon, Natchez, secretary. Meets third Tuesday each month. Natchez, 7:30 p. m.

Amite County Medical Society: D. H. Thornhill, Crosby, secretary.

Central Medical Society: E. L. Walker, Magee, president; L. W. Long, Jackson, secretary. Meets third Tuesday each month, Robert E. Lee Hotel Roof, Jackson, 7:00 p. m.

Claiborne County Medical Society: E. P. Jones, Hermanville, president; G. W. Acker, Port Gibson, secretary.

Clarksdale and Six Counties Medical Society: D. O. Pierce, Jonestown, president; N. C. Knight, Clarksdale, secretary. Meets fourth Wednesday of March and second Wednesday of November, Elks Club, Clarksdale, 2 p. m.

Clarke-Wayne Counties Medical Society: W. P. Gray, Waynesboro, president; Albert Hand, Shubuta, secretary.

Coahoma County Medical Society: J. A. Slack, Friars Point, president; N. C. Knight, Clarksdale. secretary. Meets second Wednesday each month, Clarksdale Hospital, Clarksdale, 1:30 p. m.

Delta Medical Society: J. W. Lucas, Moorhead, president; F. M. Acree, Greenville, secretary. Meets second Wednesday of April and October. Rotates through five counties, 2 p. m.

DeSoto County Medical Society: J. M. Wright, Hernando, president; L. L. Minor, Rt. 4., Memphis, secretary. Meets first Monday of January, April, July, October, Hernando, 10 a. m.

East Mississippi Medical Society: C. H. Gully, DeKalb, president; T. L. Bennett, Meridian, secretary.

Franklin County Medical Society: L. Costley, Meadville, secretary.

Hancock County Medical Society: A. P. Smith, Bay St. Louis, secretary.

Homochitto Valley Medical Society: Lucien S. Gaudet, Natchez, president; W. K. Stowers, Natchez, secretary. Meets January, April, July and October, 2:00 p. m.

Issaquena-Sharkey-Warren Counties Medical Society: T. P. Sparks, Jr., Vicksburg, president; Leon S. Lippincott, Vicksburg, secretary. Meets second Tuesday each month Mississippi State Charity Hospital, Vicksburg.

Jackson County Medical Society: W. J. Weatherford, Pascagoula, president; R. G. Lander, Pascagoula, secretary. Meets second Thursday of March, June, September and December, Jackson County Hospital, Pascagoula, 7 p. m.

Jefferson County Medical Society: W. T. Harper, Fayette, secretary.

Newton County Medical Society: W. T. Pennington, Decatur, president; Dudley Stennis, Newton, Secretary.

North Mississippi Medical Society: R. G. Grant, Holly Springs, president; A. H. Little, Oxford, Secretary.

Northeast Mississippi Thirteen Counties Medical Society: Z. A. Dorsey, Troy, president; A. J. Stacy, Tupelo, secretary. Meets third Tuesday, March, June, September and December.

Pike County Medical Society: J. L. Bauer, McComb, president; Elise Rutledge, McComb, secretary. Meets first Thursday each month, McComb, 6:30 p. m.

Pontotoc County Medical Society: L. O. Carruth, Tupelo, R.F.D., president; O. F. Carr, Pontotoc, secretary. Meets first Tuesday each month, Pontotoc.

South Mississippi Medical Society: J. Gould Gardner, Columbia, president; F. T. Bower, Hattiesburg, secretary.

Stone County Medical Society: Earl W. Green, Wiggins, secretary. Meets with Harrison-Stone-Hancock Counties Medical Society.

Tate County Medical Society: W. D. Smith, Senatobia, president; J. Sidney Eason, Coldwater, secretary. Meets second Wednesday each month, Senatobia.

Tri-County Medical Society: B. L. Crawford, Tylertown, president; R. B. Zeller, Hazlehurst, secretary. Meets second Tuesday of March, Copiah-Lincoln Junior College, Wesson; June, Walthal Hotel, Tylertown; September, Riverside Hotel, Monticello; December, Whitworth College, Brookhaven, 12:30 p. m.

Wilkinson County Medical Society: E. M. Butler, Centreville, secretary.

Winona District Medical Society: P. B. Brumby, Lexington, secretary.

MISSISSIPPI HOSPITALS—CALENDAR OF STAFF MEETINGS

MISSISSIPPI STATE HOSPITAL ASSOCIATION:

Eighth Annual Session, Meridian, May 10, 1937.

Anderson Infirmary: Second Friday, each month, 6:00 p. m.

Biloxi Hospital: First Friday, each month, 7:30 p. m.

Clarksdale Hospital: Second Wednesday, each month, 1:30 p. m.

George C. Hixon Memorial Hospital: First Monday, each month.

Greenwood Leflore Hospital: Second Monday, each month, 8:00 p. m.

Houston Hospital: Last Thursday, each month.

Jackson County Hospital: Second Thursday, each month except July and August. 7:00 p. m.

Jackson Infirmary: Last Tuesday, each month, 6 p. m.

Meridian Sanitarium: Second Thursday, each month, 6:30 p. m.

Mississippi Baptist Hospital: Third Tuesday, each month, 6:30 p. m.

Natchez Sanatorium: Second Tuesday, each month 7:30 p. m.

Northeast Mississippi Hospital: First Monday, each month, 7:30 p. m.

Rush's Infirmary: Second Thursday, each month, 7:00 p. m.

South Mississippi Infirmary: Last Thursday, each month, 5:00 p. m.

U. S. Veterans Hospital, Gulfport: Every Monday, Tuesday, Wednesday, and Thursday, 10:45 a. m.

Vicksburg Hospital: Second Thursday, each month 7:00 p. m.

Vicksburg Infirmary: First Wednesday, each month, 7:00 p. m.

Vicksburg Sanitarium: Tenth or week of tenth each month, 6:30 p. m.

Winona Infirmary: First Thursday, each month. 7:30 p. m.

STATE BOARD OF HEALTH

Recent visitors:

Dr. William DeKleine, Medical Director, American Red Cross, Washington.

Mr. Henry M. Baker, American Red Cross, San Francisco, California.

Dr. Crit Pharris, Director of the Communicable Disease Division of the Tennessee State Board of Health, spent several days observing the program of epidemiology in Mississippi.

Dr. W. A. Evans, Mississippi's most famous medical son, was a visitor in the offices of the State Board of Health on June 1.

For all of the month of June, the following fellows of the Rockefeller Foundation will observe and study the public health program in this state with the view of learning something which may be useful to them when they return to their posts in their countries.

Dr. Juan A. Bernall, Republic of Panama.

Dr. Albert Jacqueminot, Mexico City.

Mr. Andres Lasaga, Sanitary Engineer, Mexico City.

Dr. C. C. Smith, former director of the Sunflower County Health Department, has just returned from a year's study at Johns Hopkins School of Hygiene and Public Health, where he earned his Certificate in Public Health. Dr. Smith has been placed in charge of the Pearl River County Health Department, Poplarville.

On the evening of June 9, Dr. Underwood spoke at the annual banquet held by the Memphis and Shelby County Health Departments. The subject of his talk was "The Economy of Health."

The State Board of Health file of issues of "The Mississippi Doctor" for several years back is complete with the exception of the March, 1934, issue. If you have a copy and you do not wish to keep it permanently, Dr. Underwood would be glad to have it

From May 11th through the 15th, Dr. Underwood attended the meeting of the American Medical Association, going as delegate from the Mississippi State Medical Association. Report on the programs of the Section on Public Health, Industrial Hygiene, and Preventive Medicine was made at the June 2 meeting of the Central Medical Society, Jackson. Detailed report of the House of Delegates business meetings will be made at the next meeting of the State Medical Association.

Dr. Felix J. Underwood returned June 8 from a trip to Washington to attend a meeting of the National Advisory Committee on Maternal and Child Health. Dr. Underwood is a member of this committee which is formulating policies and plans for child hygiene activities made possible by Social Security Funds. While in Washington, Dr. Underwood also attended the meeting of the state directors of maternal and child health work.

On May 29, Dr. Underwood addressed the graduating class of the Litton School, Boyle. This school has had an unusual interest in public health and has had as a special project for the past year medical and dental examination and immunization of pupils, installation of safe school drinking fountain, construction of concrete sanitary privies, clean-up work, and other worthwhile things for themselves and the community. This work is the result of a hygiene class conducted in the school by the public health nurse of the Bolivar County Health Department, and the interest and appreciation by the superintendent of the value of sanitation, immunization, and health education.

MEDICAL EXAMINATIONS HELD

Regular annual medical examinations were conducted by the State Board of Health at the New Capitol. on June 22 and 23.

At one time, when there was no restriction on medical training, large numbers of men presented themselves for examination, even as many as 400 a year, but many failed. Now it is the exception rather than the rule for any young man who has been trained in the modern Grade A medical school to fail on the examination.

CONFERENCES OF LOCAL AND COUNTY REGISTRARS HELD

On May 28, the second annual conference of the

County and District Registrars was held at New Albany with between 75 and 100 persons in attendance representing about thirty counties. Among the number was Dr. John Collinson who came from Washington to attend this conference, and to spend one day in the Vital Statistics office of the State Board of Health. Dr. Collinson is the assistant chief statistician for vital statistics for the Bureau of the Census.

A conference of county and district registrars was held June 2 at Laurel, representing south Mississippi. This was a very successful and profitable meeting.

A conference of local registrars in the Delta was held at Cleveland on June 5. Each county, with the exception of Washington, was represented by one or more persons.

Through these meetings the various registrars of vital statistics in Mississippi have become acquainted with one another and have profited greatly by listening to experiences in certain registration problems in counties. Most of the talks were made by the registrars themselves.

FELIX J. UNDERWOOD,
Executive Officer

Jackson, June 11, 1936.

CENTRAL MEDICAL SOCIETY

The Central Medical Society met May 1, 1936 for its regular meeting at the Robert E. Lee Hotel Roof. About fifty members were present to enjoy the delicious steak dinner served in the beginning of the meeting.

After the business session, the scientific program was entered into. "The Nervous Child of Today" was given by Dr. Kennedy of Magee, Miss. This was a most interesting paper and was thoroughly discussed by Drs. Bullock, Johns, Womack, Jones, Shands, and others.

A most interesting report from the "Southeastern Surgical Congress" was given by Dr. John Darrington, after which Dr. Rembert reported the accomplishments of the "American College of Physicians."

Everyone enjoyed the meeting very much.

DESOTO COUNTY

Dr. Wardsworth has located in Hernando. He has the office and equipment of the late Dr. A. J. Weissinger. The doctor formerly lived at Bartlett, Tenn.

Dr. A. L. Emerson, Hernando, though a busy man, finds the time to be active in the work of his church, the Southern Baptist; he is a trustee of several of its institutions.

Lancelot Minor, Jr., son of ye county editor, is at home from the University of Virginia where he was a freshman. He speaks enthusiastically of his S. A. E. connection.

It is gratifying to know of Dr. T. M. Dye's recovery from a severe illness and his election to the mayoralty of Clarksdale.

L. L. MINOR, County Editor.

Route 4, Memphis, Tenn., June 9, 1936.

EAST MISSISSIPPI MEDICAL SOCIETY

The second quarterly meeting for 1936 of the East Mississippi Medical Society was held at City Park, Philadelphia, Thursday, June 18, beginning at 3:30 p. m.

The program in charge of Drs. D. V. Galloway, H. H. Robinson and T. L. Bennett, as announced by Dr. T. L. Bennett, secretary, was as follows:

3:30 o'clock—Business.

3:45 o'clock—Undulant Fever—Dr. T. D. Bourdeaux, Meridian.

4:15 o'clock—Report of Four Fetal Deaths—Dr. Dudley Stennis, Newton.

4:40 o'clock—The Reduction of Surgical Mortality—Dr. W. H. Parsons, Vicksburg.

6:00 o'clock—Barbecued Lunch, Courtesy Neshoba County Physicians.

Dr. C. M. Gully is president of the society this year. The vice-presidents are Drs. W. W. Parkes, Winston County; W. J. Pennington, Newton County; W. H. Banks, Neshoba County; W. C. Norris, Clarke County; M. H. Clark, Kemper County; E. B. Key, Lauderdale County.

The arrangement committee consisted of Drs. R. G. Hand; Claude Yates and C. H. Harrison.

ISSAQUENA-SHARKEY-WARREN COUNTIES MEDICAL SOCIETY

A regular monthly meeting of the Issaquena-Sharkey-Warren Counties Medical Society was held at the Mississippi State Charity Hospital, Vicksburg, Tuesday, June 9, with Dr. T. P. Sparks, Jr., president, presiding, and twenty-three members and four guests present. The members of the society were the guests of Drs. Edley H. Jones, Superintendent of the Mississippi State Charity Hospital, and N. B. Lewis, Chief Surgeon. After a fine supper served at 7:30 p. m. the following program was presented: Papers and Discussions: Pediatrics—Dr. W. P. Robert, Vicksburg, chairman:

1. Erysipelas in Children and Its Treatment—Dr. R. E. Wilson, Greenville. Discussed by Drs. G. C. Jarratt, A. Street, F. M. Smith, and W. P. Robert. Dr. Wilson closed.
2. Case Report—For Diagnosis and Discussion (Lymphoblastoma)—Dr. G. C. Jarratt. Discussed by Dr. E. T. White, Greenville.
3. Case Report—For Diagnosis and Discussion (Carcinoma of the Uterus in an Infant)—Dr. W. P. Robert. Discussed by Dr. L. J. Clark.

Dr. Edley H. Jones invited all members of the society to become members of the staff of the State Charity Hospital, and the invitation was accepted.

Dr. Jones invited the society to hold its monthly meetings, with the exception of the annual meeting in December, at the Charity Hospital. The matter was referred to the executive committee for action.

The matter of an out-patient clinic for the charity hospital was discussed, the society voted to conduct such a clinic and Dr. Edley H. Jones was named as director. It is planned to open the clinic on July 1st.

Dr. F. M. Smith, referred to the delightful "Doctors' Day" entertainment furnished by the members of the Woman's Auxiliary to this society in April, and he was directed to send a letter of thanks in behalf of the society.

The delegates to the meeting of the Mississippi State Medical Association, Drs. W. H. Scudder, Issaquena County; W. C. Pool, Sharkey County; and G. C. Jarratt, Warren County, made reports of the recent meeting at Greenville.

The next meeting of the Society will be held at the Mississippi State Charity Hospital, Tuesday, July 14, at 7 p. m. The program will be devoted to urology and the committee in charge consists of Drs. B. B. Martin, Jr., chairman, M. J. Few, H. B. Goodman, and G. P. Sanderson.

Dr. C. H. McCall, Gulfport, will be exchange essayist from the Harrison-Stone-Hancock Counties Medical Society.

As exchange essayists, from this Society, Dr. I. C. Knox, Vicksburg, presented a paper "Ovarian Tumors" before the Northeast Mississippi Thirteen Counties Medical Society at Columbus, June 16, and Dr. W. H. Parsons, Vicksburg, presented a paper, "The Reduction of Surgical Mortality," before the East Mississippi Medical Society at Philadelphia, June 18. Dr. W. K. Purks will present a paper, "The Causes of Hypertension in Young Individuals with Special Reference to Coarctation of the Aorta —Report of a Case," before the Harrison-Stone-Hancock Counties Medical Society, August 5.

LEFLORE COUNTY

Dr. Geo. Baskervill, Greenwood, visited in Alexandria, La., May 1 to 4.

Dr. and Mrs. W. H. Frizell, Brookhaven, visited Mrs. H. F. McShane, their daughter, in Greenwood, Sunday, May 3 on their way to Greenville to the meeting of the State Medical Association.

The Greenwood doctors and wives attending the meeting of the State Association at Greenville were: Dr. and Mrs. L. A. Barnett, Drs. Geo. Baskervill, S. L. Brister, Jr., Dr. and Mrs. J. C. Adams, Dr. and Mrs. W. E. Denman, Dr. W. B. Dickins, Dr. and Mrs. L. F. Ferguson. Dr. and Mrs. J. A. Crawford, Dr. and Mrs. L. B. Otken, Drs. G. Y. Gillespie, Jr., F. M. Candifer and Edgar Giles, Avalon.

Dr. S. L. Brister. Greenwood, was called to Dallas, Texas, May 5 to see his nephew who was quite ill.

Dr. Sam Brister, Jr., won the golf championship in the golf tournament, at Greenville, given as entertainment to State Medical Association visitors. Dr. J. C. Adams, Greenwood, won fourth place.

Quite a number of doctors stopped off in Greenwood on their way to and from the meeting of the State Association. Dr. and Mrs. J. W. Barksdale, Jackson, spent Friday afternoon, May 8, with their daughter, Mrs. W. G. Humphrey.

Dr. and Mrs. S. L. Lane, Hollandale, attended the wedding of Miss Lucille Banister to Mr. Edgar Caruthers, Greenwood, Sunday, May 10, at First Methodist church.

Dr. G. W. F. Rembert, Jackson, passed through Greenwood from Hot Springs, May 17.

Dr. D. O. Pierce, Jonestown, visited his brother, Judge M. F. Pierce, in Greenwood, Wednesday, May 27.

Dr. C. R. Freeland, Glendora, was a visitor to Greenwood, May 28.

Dr. and Mrs. A. L. Gray and two daughters, Betty and Mary, Gulfport, visited friends in Greenwood, May 18 to 25.

Dr. and Mrs. J. T. Spence, Greenwood, attended the horse show at Helena, Ark., May 17.

W. B. DICKINS, County Editor

Greenwood, May 30, 1936.

MONROE COUNTY MEDICAL SOCIETY

The Monroe County Medical Society was called in special session, Wednesday, afternoon to arrange with Mr. J. Edward Gatlin for a clinical and lecture course on obstetrics by Dr. Maxwell E. Lapham.

Drs. C. H. Love, C. B. McCowan, Aberdeen; Darracott, Hamilton, C. E. Boyd and A. I. Boozer, Amory, were appointed on a committee to arrange clinical material for Dr. Lapham.

The lectures are to be held at the Aberdeen Hospital every Monday afternoon, beginning Monday afternoon, July 6, at 2 o'clock.

I attended Dr. Lapham's course of lectures at Tupelo last winter. They are very interesting and instructive. It is fine for us to study and review this subject together.

Obstetrics is the most important branch of medicine. Two or more lives are involved in every case. Too many mothers as well as babies are dying during or as a result of labor. We have improved our technique and lowered the mortality rate a great deal but it is shamefully high now. We have clarified and explained many mysteries and processes of childbirth but there are many questions to be answered yet. What are the causes of labor, the etiology of eclampsia, the reasons for congenital malformations? And there are many other mysteries to be solved.

When Eve partook of the forbidden fruit in the Garden of Eden, the Lord told her that she and her offspring (females) would be punished by childbirth. We have done very little real good making this great ordeal painless. Our methods of relief are too dangerous. May we soon learn to select the right remedy for each particular case.

We need a better understanding of the use of pituitrin. It is causing more invalids than any other one thing. Doctors resort to it as a time saver, giving it too early and in too large doses. The result is extensive lacerations of the cervix and perineum, severe hemorrhages, strained muscles of the uterine and abdominal walls which never return to normal, shock of the mother, with its dangers. The baby's head is rushed through the bony pelvis with one hard long pain without rhythm; the brain is traumatized, causing paralysis and mental defects.

Dr. Lapham is going to tell us all this. I'll leave it to him. He can tell it better and more of it. We invite the doctors of surrounding counties to come and get this postgraduate course. You cannot spend ten Monday afternoons to better advantage.

B. C. TUBB

Smithville, June 13, 1936.

TALLAHATCHIE COUNTY

The damage to crops, owing to dry weather, has reached the point where it becomes alarming, especially in the hill section. A small area, including Charleston, was the recipient of a fine rain Wednesday. A small area east of Charleston had a downpour which did great damage to the fields, washing up much of the corn and cotton, the rain was accompanied by hail.

Dr. and Mrs. Moody were called to Poplarville last week to be at the bedside of Mr. G. W. Moody, a brother of Dr. Moody. South Mississippi has not suffered from the dry weather. The writer experienced a very heavy rainfall between Franklinton and McComb City.

The Tallahatchie County Medical Society met in monthly session Thursday evening at Padukah Wells, about four miles northeast of Charleston, where the members enjoyed a sumptuous meal consisting of fish, stew, chicken and many other appetizers. There were about a dozen physicians and about fifteen or twenty others who enjoyed the dinner. The next meeting will be in Webb.

Dr. and Mrs. J. E. Powell were Memphis visitors the early part of this week. Dr. Powell attended the meeting of the registrars of vital statistics of this district Friday in Cleveland.

Mrs. B. C. Morgan, who at one time was head nurse of the Charleston Hospital, before marrying Mr. Morgan, and who, for the last two years has been employed by the Federal Government for Tallahatchie County, where she has been doing vaccinations, immunizing against diphtheria, typhoid fever and teaching in the rural districts, along the lines of hygiene and other subjects, is preparing to go to Chicago where she will take some postgraduate work preparatory for county health nursing.

Miss Marguerite Ward of the Charleston Hospital is spending a few days with her mother in Sumner.

I am not the official editor of this county but since I see no one else representing our county I feel that someone should help out as everything sent in helps to make our *Mississippi Doctor* a better magazine. I think we have a splendid magazine and I think some physician of every county in the state should take it upon himself to see that his county is represented. We are all interested in each other and each other's problems. Why not discuss them through out state medical magazine

J. W. MOODY, County Editor.
Charleston, June 6, 1936.

TRI-COUNTY MEDICAL SOCIETY

The eighth quarterly meeting of the Tri-County Medical Society was held at Tylertown, Tuesday, June 9. The program as announced by the secretary, was as follows:

Dinner, 12:30 p. m.
Medical Jurisprudence—Hon. B. O. Mounger, Tylertown.
Colitis—Dr. T. F. Conn, Monticello.
Glossitis—Dr. R. S. Savage, Brookhaven.
Pellagra—Dr. J. R. Markette, Brookhaven.

Dr. B. L. Crawford, Tylertown is president of the society this year.

Dr. A. L. Gray of the State Board of Health spent several days in Copiah County during May.

Dr. W. E. Clark, Hopewell, Copiah County, has returned to the Mississippi State Hospital at Whitfield where he had previously been a member of Dr. Mitchell's staff for many years.

Dr. J. C. Maguire, Hazlehurst, was a recent visitor to New Orleans, attending the meeting of the National Tuberculosis Association.

The Tylertown Hospital, Tylertown, is now included in the A. M. A. roster of registered hospitals.

R. B. ZELLER, Secretary.
Hazlehurst, May 30, 1936.

WARREN COUNTY

The staff meeting of the Vicksburg Hospital in May was held at the spacious and inviting home of Dr. I. C. Knox. Appetizing and delightful refreshments were served out on the lawn. The barbecued meats and "stream lined cans" were all that one could ask or expect of a good churchman. Mrs. Knox, with her charm of manner, courtsey, and friendly way, made each member of the staff and guests feel doubly welcome as she saw that each plate was well helped.

Dr. J. W. Sapp of Florida, and Dr. C. T. Martin of Georgia, have recently been assigned to the C.C.C. Camps at Vicksburg and adjoining territory. Lieutenants Sapp and Martin are filling the places formerly held by Drs. West and Paden, who were transfered to other fields.

The medical profession of Vicksburg and other friends are sincerely pleased to know that Dr. B. B. Martin, Jr., is well on the road to recovery after a recent operation for appendicitis. Benson has been associated with his father at the Vicksburg Infirmary for a year or more.

High noon and all is well, Tuesday, June 2, 1936, as from Old Trinity Church of our city the throngs of friends pour out after witnessing the wedding ceremony that made Dr. John Alexander Klein Birchett, Jr., and Miss Charlotte Caroline Carter, man and wife. Dr. Jack was born and reared in Vicksburg, and his pretty bride has lived here for several years. They are well known and sincerely loved by many Vicksburg friends who lovingly and tenderly hold ajar the door of hope and happy anticipations as the two pass together into the world of their unseen future.

Dr. Gilruth Darrington, of Yazoo City, was a visitor in our city recently and he being a good *"Boy Scout"* did his *"bit"* by acting as best man in the Birchett-Carter wedding.

The new superintedent at the State Charity Hospital, Vicksburg, is Dr. Edley H. Jones. We are advised that Dr. Nathan B. Lewis is his chief surgeon.

Edley is unusually energetic, quite distinctive as a presiding officer, possessing skill and aptitude as an eye, ear, nose and throat specialist, and may we not expect a pacific dexterity in administration, and do our best to aid.

We have before us the program of the regular monthly meeting of the Issaquena-Sharkey-Warren Counties Medical Society. We note the secretary advises that the executive committee of this society has accepted a cordial invitation from Dr. Edley Jones, to hold the June meeting at the Mississippi State Charity Hospital in this city, as his guests. We further note that Dr. R. E. Wilson, of Greenville, will be a guest speaker on this occasion.

H. T. IMS, County Editor
Vicksburg, June 9, 1936

WASHINGTON COUNTY

Mrs. D. C. Montgomery, Montbury, Greenville, recently visited her sister Mrs. Bullington in Memphis.

Dr. and Mrs. D. C. Montgomery, Montbury, Greenville, with their two sons, John and Billy, motored to Woodberry Forest, Virginia, to accompany Cameron, Jr., home. Cameron Jr. has been at Woodberry Forest at school. On their way home they will stop in Washington, D. C., for several days.

The annual Leland horse show to be held July 3 and 4 is in charge of Dr. K. L. Witte. Outstanding entries are expected to compete and a large attendance is assured.

Jerome B. Hirsch, Jr., son of Dr. and Mrs. J. B. Hirsch, Greenville, was a member of the graduating class of the Greenville High School, this year.

Dr. Paul Gamble attended the meeting of the American Urological Association in Boston, Mass. He was met in Memphis by Mrs. Gamble on his return.

The following Greenville doctors attended the meeting of the American Medical Association in Kansas City: H. A. Gamble, J. A. Beals, J. F. Lucas and J. C. Pegues.

The many friends of Dr. E. T. White, Greenville, regret to learn of the recent illness of his mother, Mrs. J. A. Johnson of Merigold, who was operated upon at the King's Daughters Hospital in Greenville recently.

JOHN G. ARCHER, County Editor.
Greenville, June 5, 1936.

WINSTON COUNTY

Dr. E. L. Richardson has returned from Hot Springs feeling quite a bit better after taking treatment for neuritis.

Drs. E. Lovorn and T. C. Suttle, former of Fearn Springs neighborhood and latter from Betheden neighborhood, were in the city being members of the board for the old age pensions, which has been in session here.

We noticed Dr. L. T. Parks of Fearn Springs in the city this week.

We are planning a postgraduate course here in obstetrics for a period of ten weeks, one day of two hours each per week. We are expecting same to begin the first week in July.

Hot weather and malaria are showing up together; "Poor Doctors" as well as laymen.

M. L. MONTGOMERY
Louisville, June 9, 1936.

MISSISSIPPI HOSPITALS

MISSISSIPPI STATE CHARITY HOSPITAL

An organization meeting of the staff of the Mississippi State Charity Hospital at Vicksburg was held Tuesday, June 9, at 6:30 p. m. with Dr. Elley H. Jones, Vicksburg, superintendent, presiding.

Officers were elected as follows:

President, Dr. N. B. Lewis; Vice-President, Dr. W. P. Robert; Secretary, Dr. Leon S. Lippincott.

Members of the staff were announced as follows:

ATTENDING STAFF—Drs. P. S. Herring, G. C. Jarratt, W. E. Johnston, E. H. Jones, N. B. Lewis, L S. Lippincott, W. K. Purks, W. P. Robert, T. P. Sparks, Jr., R. A. Street, Jr.

CONSULTING—Drs. J. A. K. Birchett, J. A. K. Birchett, Jr., L. J. Clark, C. J Edwards, J. S. Ewing, H. H. Haralson, H. H. Johntson, S. W. Johnston, I. C Knox, B. B. Martin, B. B. Martin, Jr., W. H. Parsons, D. A. Pettit, G. P. Sanderson, F. M. Smith, A. Street, D. P. Street, G. M. Street, H. B. Wilson.

COURTESY—Drs. A. K. Barrier, Rolling Fork; J. B. Benton, Valley Park; M. J. Few, Rolling Fork; G. W. Gaines, Tallulah; H. B. Goodman, Anguilla; H. S. Goodman, Cary; T. W. Huey, Grace; W. C. Pool, Cary; W. H. Scudder, Mayersville; W. A. Smith, Panther Burn; E. B. Stribling, Rolling Fork.

House Physician—Dr. V. R. Liddell.

The matter of an out-patient clinic was discussed and presented. It was voted to ask the Issaquena-Sharkey-Warren Counties Medical Society to conduct the clinic.

MISSISSIPPI STATE HOSPITAL WHITFIELD

Dr. C. D. Mitchell was appointed superintendent of the Mississippi State Hospital at Whitfield, and assumed his duties March 20 of this year.

Dr. W. A. Dearman, formerly of Gulfport, was appointed assistant superintendent of the Mississippi State Hospital at Whitfield, and assumed his duties May 1.

The sophomore class, Medical Department, of "Ole Miss" spent the week beginning May 18 and ending May 23 at the Mississippi State Hospital inspecting buildings, attending staff meetings and reviewing cases of considerable interest. The class consisted of the following: Ralph Sneed, Lafayette Springs; Robert D. Moreton, Jackson; Hiram R. Elliott, Courtland; W. L. Cockerham, Jr., Gunnison; Emanuel Cohen, Pottsville, Pa.; Mary Elizabeth Fatherree, Greenwood; Mrs. Madena H. Peterson, Wesson; David B. Wilson, Yazoo City; Charles L. Neil; Ellisville; Leroy S. Pearce, Falkner; George T. McPhail, Slate Springs; Isaac Chester Farmer, Mendenhall; Alfred Habeeb, Vicksburg; Thomas L. Harvey, Mathiston; James S. Fisackerly, Blaine; Eugene Morrison, Corinth; F. B. Hodges, Jr., Wesson; James A. Clark, Ruleville; Thomas E. McKell, Port Gibson.

On May 30, Dr. A. C. Kalb, superintendent of the State Hospital at Little Rock, Arkansas, accompanied by the board members of the various insane hospitals throughout Arkansas, visited the Mississippi State Hospital, making a thorough inspection of all the buildings and familiarizing themselves with the policies and management of the institution. The board members consisted of the following: E. E. Mitchell, Morrielton, Ark.; Wilbur Harkey, McGehee, Ark.; Floyd Fulkerson, vice-chairman, North Little Rock, Ark.

W. A. DEARMAN,
Assistant Superintendent

Whitfiield, June 3, 1936.

NORTHEAST MISSISSIPPI HOSPITAL

The staff of the Northeast Mississippi Hospital met at the hospital in regular session Monday night, June 1. After partaking of a delicious dinner with Drs. Caldwell and Christian as hosts the meeting was called to order by President Caldwell. The scientific program was opened by Dr. H. B. Sutherland who gave a paper on "Idiopathic Hyperchromic Anemia" and gave several very interesting case reports on this disease. There was discussion by several of the members.

Our next meeting will be the first Monday night in July and Drs. Pharr and Crabb are to open the scientific program.

Members present were Drs. W. H. Anderson, R. B. Caldwell, R. B. Cunningham, A. G. LeRoy, L. L. McDougal Sr., S. L. Pharr, W. W. Strange, H. B. Sutherland. Miss Maude Childs and Miss Ruth Lokey, graduate nurses. were present as guests.

A. G. LeROY

Booneville, June 3, 1936.

VICKSBURG SANITARIUM

A regular monthly meeting of the staff of the Vicksburg Sanitarium was held June 10, and after a supper served at 6:30 p. m. was called to order by the vice-president, Dr. G. C. Jarratt, with twelve members present. After the business of the staff and a consideration of the reports from the records department and analysis of the work of the hospital, Dr. F. Michael Smith, Director, Warren County Health Department, presented reports of vital statistics for the month of May and for the year of 1935.

SPECIAL CASE REPORTS:

1. Perforated Duodenal Ulcer with Recovery.—Dr. G. M. Street.
2. Polycystic Kidney.—Dr. A. Street.
3. Malignant Growth of Pelvis Accounting for Persistent, Previously Obscure, Pain in Right Inguinal Region.—Dr. L. J. Clark.

Selected roentgen ray studies were shown as follows: Bone Cyst; Hip Joint—End Result of Childhood Injury; Pulmonary Tuberculosis (four cases); Lung Abscess (two cases); Thorax—For Discussion (two cases); Hydronephrosis; Sarcoma of Kidney; Polycystic Kidney (two cases).

Three-minute reports of the literature of the month were presented as follows:

Dr. L. S. Lippincott.—Sodium Citrate in Spirochetal Infections.

Dr. L. J. Clark.—Liver Therapy in Pellagra and Pellagra-Like Enteric Conditions.

Dr. H. H. Johnston.—Ozena.

The next meeting of the staff will be held at the Sanitarium, Friday, July 10.

ABSTRAST—POLYCYSTIC KIDNEY

A. Street, M.D.

PATIENT—White, female, age 53, married. Three living children; no miscarriages. Admitted to Sanitarium April 21, 1936.

CHIEF COMPLAINT—Low back discomfort; lumbar pain, sometimes right, at other times left. Weak. Has dizzy spells. Has thumping sensation in head. Slight loss of weight.

PRESENT ILLNESS—Attack of urinary frequency and tenesmus with bloody urine two months ago. A cystoscopic examination at that time was followed by a tremendously severe reaction and patient feels that she has never recovered from this reaction. Report of findings at cystoscopic examination brought by patient, showed a diagnosis of nephroptosis and infected hydronephrosis. Has continued to have slight fever and pus in urine up to present time.

PERSONAL HISTORY—Has good appetite; vague digestive complaints. Conduct and conversation is that of a typical psychoneurotic. Bowels move normally. Urinates three times each night. Menopause one year ago. No visual disorder.

PREVIOUS HISTORY—Pelvic operation 15 years ago and operation for acute intestinal obstruction a few years later.

FAMILY HISTORY—Father died at age 60 of kidney and heart trouble. Mother died at age 41 of an acute abdonimal condition. One brother living and well at age 51. Had five sisters; four are living and well; one died of what was thought to be cancer of the kidney.

PHYSICAL EXAMINATION—Well developed and adequately nourished. Face appears slightly puffed, ankles free of edema. Appears weak and unsteady. Temperature 99.2 degrees F.; pulse 86; respiration 20; blood pressure 110/70. Pupils equal and react to light; knee jerks active. General examination not remarkable except for abdomen which is slightly prominent. Two laparotomy scars, one low midline and one low right rectus. Large mass at right of umbilicus, extending from right lower quadrant to right costal margin, firm, nodular, tender and moves with respiration. It is impossible to say whether or not it is continuous with liver. No palpable mass on left.

UROLOGICAL EXAMINATION. — Intravenous urogram shows good filling of right kidney pelvis. Pelvis is dilated and rambling so that area on film covered by pyelogram measures 3x3 inches. Renal pelvis appears normal. Infundibula long and broad; calyces large and roughly globular. No crescentic shadows. No distortion of infundibula or calyces suggesting impingement by cysts or growth. Pyelogram does not give impression of being spidery. Shadow of kidney itself is very large, covering an area on film 8x5 inches. Left kidney shows complete absence of media; left kidney shadow very large.

Retrograde pyelogram of left kidney shows pelvis, infundibula and calyces similar to those of the right side.

Urine from the right kidney: normal color; slightly cloudy; neutral reaction; large trace of albumin; numerous leukocytes and pus cells; few bacilli. Stained preparations: numerous leukocytes and pus cells (polymorphonuclears); numerous gram negative and gram positive bacilli. Cultures: many gram negative bacilli (B. coli); few gram positive bacilli (spores).

Urine from left kidney: normal color; slightly cloudy; slightly acid; large trace of albumin; few leukocytes. Stained preparation: few leukocytes (polymorphonuclears). Cultures: many gram negative bacilli (B. fecalis alkaligines).

Inspection of bladder wall shows evidence of mild chronic cystitis; ureteral orifices appear normal.

Phenolsulphonphthalein given intravenously was excreted as follows: Right—first 15 minutes, 33 cc. of urine; dye, 9 per cent; second fifteen minutes 26 cc. of urine; dye, 15 per cent. Left kidney—first fifteen minutes, 11 cc. urine; dye, none; second fifteen minutes, 10 cc. or urine, dye 1 per cent.

CLINICAL LABORATORY—Blood: hemoglobin 92 per cent; erythrocytes 4,360,000; color index 1; leukocytes 6,000; differential leukocyte count, small lymphocytes 23 per cent, large lymphocytes 7 per cent, monocytes 4 per cent, neutrophils, mature 39 per cent, band forms 27 per cent; no malaria found. Urea nitrogen 19.61 mg. per 100 cc.; plasma fibrin 0.084 per cent, plasma albumin 6.420 per cent, plasma globulin 3.049 per cent; total plasma proteins 9.553 per cent.

Blood Wassermann, Kline and Young, Kahn and Eagle flocculation tests negative. Agglutination test for Brucellosis negative.

Bladder urine (catheter): slightly pale; cloudy; acid; sp. gr. 1.024; albumin, slight trace; many pus cells; few fresh red blood cells; numerous bacilli.

ROENTGENOLOGIC EXAMINATION — Cholecystography shows no gallbladder filling. Flouroscopy of stomach show nothing abnormal.

TENTATIVE DIAGNOSIS—The lumbar pain, large kidneys, nodular palpable mass in right abdomen, low phenolsulphonphthalein excretion, history of poor tolerance of cystoscopic examinations, are all findings compatible with the diagnosis of polycystic kidney. Also the family history of one sister dying of "cancer of the kidney" suggests the possibility that the sister may have had polycystic kidneys. This diagnosis was considered but we were not sure.

PROCEDURE—In order to be certain, a small right rectus laparotomy incision was made May 11, 1936. The mass on the right proved to be a large polycystic kidney. The left kidney showed the same condition. Liver and other viscera seemed to be normal. The operation consisted of exploration only.

The operation was well tolerated and the patient was discharged on May 27, 1936.

FINAL DIAGNOSIS—Polycystic disease of the kidney, bilateral, and infected hydronephrosis.

REMARKS—Polycystic kidney is a congenital and familial disease. For practical purposes it may always be considered bilateral when dealing with adult patients. The polycystic kidney seen in newborn infants is apparently the same disease as that seen later in life. Infants affected with the newborn type of this disease usually die at birth or soon after. Some of them live a few years and may show renal rickets or renal dwarfism. Very few cases are detected between the newborn period and the third or fourth decades of life. The average length of life of patients with the adult type of polycystic kidney disease is about 10 or 12 years less than that of the average person.

MALIGNANT GROWTH OF PELVIS ACCOUNTING FOR PERSISTENT, PREVIOUSLY OBSCURE, PAIN IN RIGHT INGUINAL REGION

Dr. L. J. Clark

PATIENT—White, male, age 62; railroad trackman; admitted to Sanitarium March 31, 1936.

CHIEF COMPLAINT—Pain in region of right internal inguinal ring, radiating down inner side of right thigh ad around crest of right ilium and to symphysis pubis; aggravated by cough and worse on arising in the morning and after exercise. Weakness; loss of weight; anorexia; for past 10 days afternoon fever; malaise.

HISTORY OF PRESENT ILLNESS—Has noticed for past three or four years pain at irregular intervals in right leg and knee and at times pain was so severe he could walk with difficulty. Treated with relief. In 1933 there was noted some evidence of fluid in right knee joint; bandaged and apparently fluid disappeared. Hydrocele operation with recovery in 1934. In January, 1936, pain in region of internal inguinal ring was thought to be the result of what seemed to be a beginning hernia. Referred to the company hospital for further treatment and examined by an orthopedist and neurologist, who reported no findings except arthritis of lumbosacral spine and prescribed a "Camp" belt. Patient returned home and attempted to work but found that he could not gain strength and was forced to go to bed. About ten days before admission evening fever was noticed and malaise became pronounced.

PAST HISTORY—No serious illnesses other than the usual childhood diseases and yellow fever. Mild influenza in 1918. No history of injury.

FAMILY HISTORY—Father and mother died of "old age" and heart trouble. No tuberculosis, cancer or insanity in family.

PHYSICAL EXAMINATION—Apparently comfortable. Looks as if there had been considerable loss of weight although he is still obese. Few scattered rales in lower right and left chest; abiomen pendulous; liver two fingers' breadth below costal margin. Examination otherwise not remarkable.

CLINICAL LABORATORY—Findings not remarkable.

ROENTGENOLOGIC EXAMINATION—Sarcomatous changes in ascending ramus of right pubic bone with apparent bony destruction. Metastatic lung changes in right base. Spine, femurs and bones of thorax show no growth.

Patient is rapidly losing ground.

HONOR ROLL

The following have contributed to this number of our Journal:

COUNTY EDITORS: L. L. Minor, W. B. Dickins, B. C. Tubb, J. W. Moody, H. T. Ims, John G. Archer, M. L. Montgomery.—7.

SOCIETIES: East Mississippi, T. L. Bennett; Issaquena-Sharkey-Warren Counties; Monroe County, B. C. Tubb; Tri-County, R. B. Zeller.—4.

HOSPITALS: Mississippi State Charity Hospital, Vicksburg; Mississippi State Hospital, Whitfield, W. A. Dearman; Northeast Mississippi Hospital. Booneville, A. G. LeRoy; Vicksburg Sanitarium.—4.

OTHER CONTRIBUTORS: Harvey F. Garrison, Marguerite Dye, J. W. Lucas, L. L. Minor, R. B. Caldwell, T. J. Brown, W. H. Watson, H. Lowry Rush, Jos. E. Green, W. H. Frizell. D. J. Williams, Felix J. Underwood.—12.

GRAND TOTAL—27.

Your editors thank you.

WOMAN'S AUXILIARY

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SOUTH MISSISSIPPI AUXILIARY

Dr. and Mrs. T. E. Ross are enjoying a vacation trip to Washington, D. C. They went up especially for the International Kiwanis Convention.

Dr. and Mrs. Richard H. Clark are receiving congratulations upon the arrival of a baby daughter at the Methodist Hospital. She, the Clarks' third child, has been named Helen Polk, for her mother, who was formerly Miss Helen Polk.

Miss Helen Crawford, daughter of Dr. and Mrs. W. W. Crawford, has recently been awarded her M.A. Degree from Columbia University in New York City. Miss Crawford specialized in nursery school supervision.

Dr. and Mrs. Leo H. Martin have as their houseguests Mrs. Charles Friend and her son, daughter and granddaughter. They were accompanied to Hattiesburg by Mr. Bruce Giddins. Their home is in Tampa. Fla.

MRS. J. P. CULPEPPER.

NORTHEAST MISSISSIPPI 13 COUNTY AUXILIARY

At the quarterly meeting in Columbus, June 16, the Northeast Mississippi 13 Counties Auxiliary met in one of the drawing-rooms of the Gilmer Hotel for its third meeting. Mrs. W. H. Cleveland, the president, presided, and invited the doctors' wives of Columbus who had not formerly attended a meeting to enroll. The wives of Lowndes County also voted to organize an auxiliary, and elected officers.

At the close of the meeting the very hospitable Columbus doctors' wives served dainty refreshments, arranged tables for bridge, and other courtesies that made the afternoon most pleasant. Their gracious attitude will be long remembered.

LAUDERDALE COUNTY AUXILIARY

The Lauderdale County Auxiliary was organized several years ago, but has never been active, and was reorganized in March with a membership of twenty-five. We are having good attendance and meet the third Friday of each month.

The May meeting was held at the summer home of Dr. and Mrs. T. E. Royals, where swimming and a picnic supper were enjoyed.

The June meeting has held at the home of Dr. and Mrs. Charles P. Mosby, with fourteen present. Delightful refreshments were served after the meeting.

We have been inactive a long time, but are ready to challenge the other Auxiliaries.

All the doctors' wives start saving up for a new spring bonnet as we are expecting you in Meridian at the Convention!

MRS. H. LOWRY RUSH

ISSAQUENA-SHARKEY-WARREN COUNTIES MEDICAL AUXILIARY

Dr. and Mrs. George Street and daughters leave the 28 of June for a lovely trip to Mexico.

Dr. and Mrs. Charles J. Edwards are leaving Sunday for a delightful fishing trip which carries them to some of the Islands in the Gulf out from New Orleans.

Mrs. I. C. Knox has returned from Baltimore where she attended the graduation of her daughter, Mary Jo, from Goucher College.

Dr. and Mrs. Benson Martin, Jr., entertained with a lovely dinner party on the 27. The Martins' parties are always looked forward to with great pleasure.

Mrs. Guy Jarratt entertained quite a number of her friends at bridge. Mrs. Jarratt's home was filled with beautiful summer flowers for the occasion and everyone had a most enjoyable morning.

MRS. PRESTON HERRING,
Press and Publicity Chairman.

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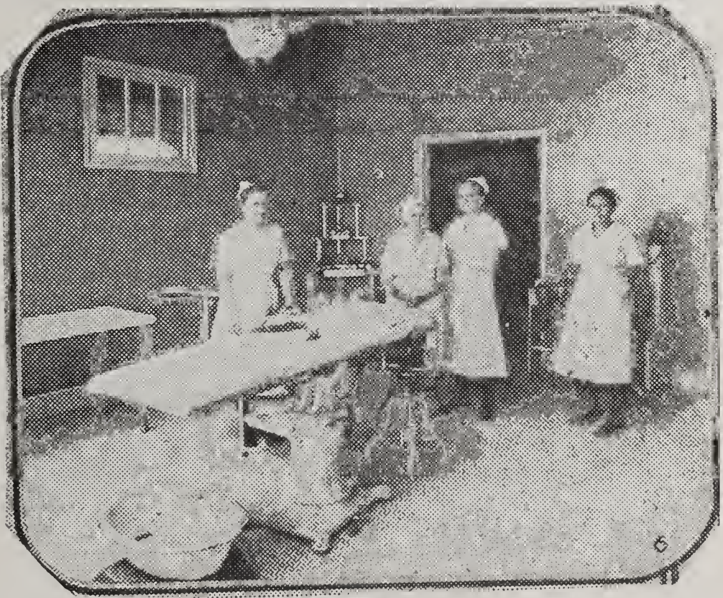

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If...

(By Rudyard Kipling)

If you can keep your head when all about you
Are losing theirs and blaming it on you;
If you can trust yourself when all men doubt you,
But make allowance for their doubting, too:
If you can wait and not be tired by waiting,
Or being lied about, don't deal in lies,
Or being hated don't give way to hating,
And yet don't look too good, not talk too wise;

If you can dream—and not make dreams your master;
If you can think—and not make thoughts your aim;
If you can meet with Triumph and Disaster
And treat those two impostors just the same;
If you can bear to hear the truth you've spoken
Twisted by knaves to make a trap for fools,
Or watch the things you gave your life to, broken,
And stoop and build 'em up with worn-out tools;

If you can make one heap of all your winnings
And risk it on one turn of pitch-and-toss,
And lose, and start again at your beginnings,
And ever breathe a word about your loss;
If you can force your heart and nerve and sinew
To serve your turn long after they are gone,
And so hold on when there is nothing in you
Except the Will which says to them, 'Hold on!'

If you can talk with crowds and keep your virtue,
Or walk with kings—nor lose the common touch;
If neither foes nor loving friends can hurt you;
If all men count with you, but none too much;
If you can fill the unforgiving minute
With sixty seconds' worth of distance run,
Yours is the Earth and everything that's in it,
And—which is more—you'll be a Man, my son!

DIARRHEA

"the commonest ailment of infants in the summer months"

(HOLT AND McINTOSH: HOLT'S DISEASES OF INFANCY AND CHILDHOOD, 1933)

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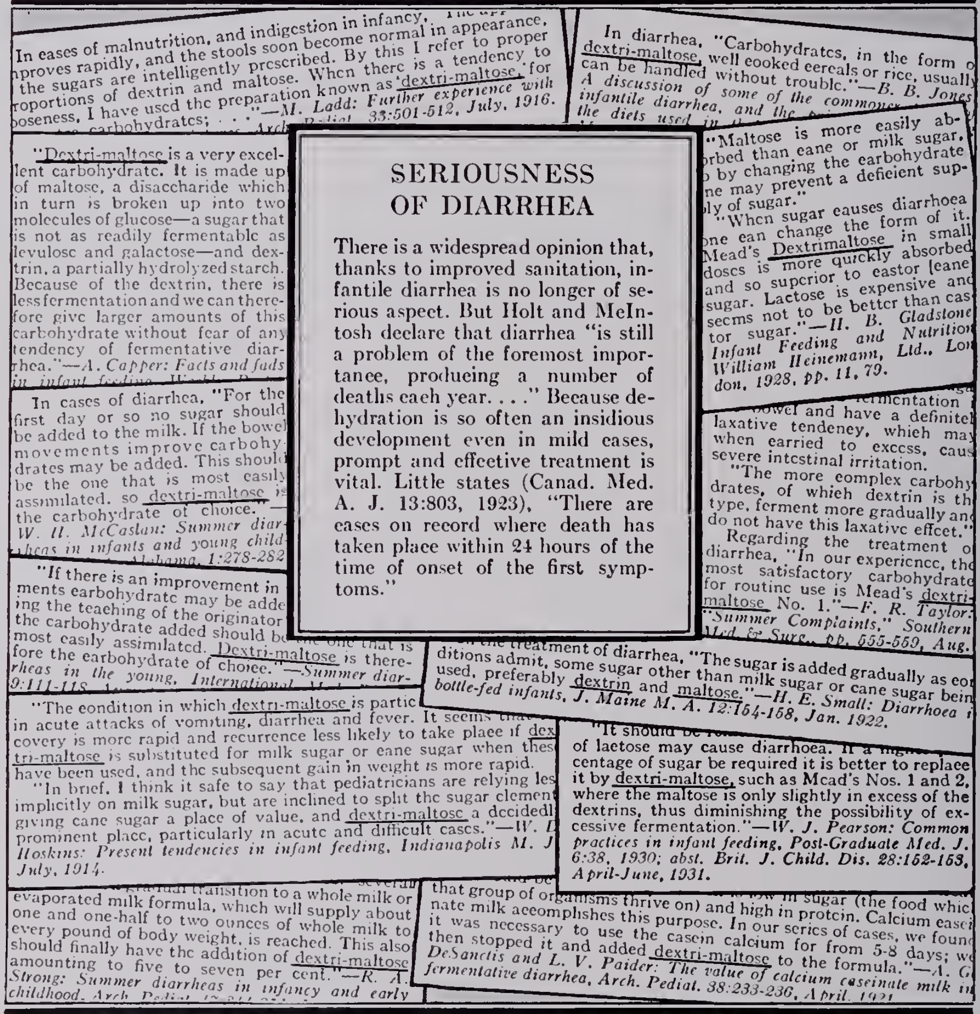

In cases of malnutrition, and indigestion in infancy, . . . mproves rapidly, and the stools soon become normal in appearance, the sugars are intelligently prescribed. By this I refer to proper roportions of dextrin and maltose. When there is a tendency to oseness, I have used the preparation known as 'dextri-maltose,' for carbohydrates; . . ."—*M. Ladd: Further experience with . . . Arch. Pediat. 33:501-512, July, 1916.*

In diarrhea, "Carbohydrates, in the form o dextri-maltose, well cooked cereals or rice, usually can be handled without trouble."—*B. B. Jones A discussion of some of the common . . . infantile diarrhea, and the . . . the diets used in . . .*

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"Maltose is more easily ab- orbed than cane or milk sugar. by changing the carbohydrate ne may prevent a deficient sup- ly of sugar."

"When sugar causes diarrhoea one can change the form of it. Mead's Dextrimaltose in small doses is more quickly absorbed and so superior to castor [cane sugar. Lactose is expensive and seems not to be better than cas tor sugar."—*H. B. Gladstone Infant Feeding and Nutrition William Heinemann, Ltd., Lon don, 1928, pp. 11, 79.*

In cases of diarrhea, "For the first day or so no sugar should be added to the milk. If the bowel movements improve carbohydrates may be added. This should be the one that is most easily assimilated, so dextri-maltose is the carbohydrate of choice."—*W. H. McCaslan: Summer diar- rheas in infants and young child- . . . Alabama, 1:278-282*

. . . fermentation . . . bowel and have a definite laxative tendency, which may when carried to excess, caus severe intestinal irritation.

"The more complex carbohy drates, of which dextrin is th type, ferment more gradually and do not have this laxative effect."

Regarding the treatment o diarrhea, "In our experience, the most satisfactory carbohydrate for routine use is Mead's dextri- maltose No. 1."—*F. R. Taylor: "Summer Complaints," Southern Med. & Surg., pp. 555-559, Aug.*

"If there is an improvement in . . . ments carbohydrate may be adde . . . ing the teaching of the originator . . . the carbohydrate added should be the one that is most easily assimilated. Dextri-maltose is there- fore the carbohydrate of choice."—*Summer diar- rheas in the young, International . . . 9:111-118 . . .*

. . . the treatment of diarrhea, "The sugar is added gradually as con ditions admit, some sugar other than milk sugar or cane sugar bein used, preferably dextrin and maltose."—*H. E. Small: Diarrhoea i bottle-fed infants, J. Maine M. A. 12:154-158, Jan. 1922.*

"The condition in which dextri-maltose is partic . . . in acute attacks of vomiting, diarrhea and fever. It seems . . . covery is more rapid and recurrence less likely to take place if dex tri-maltose is substituted for milk sugar or cane sugar when thes have been used, and the subsequent gain in weight is more rapid.

"In brief, I think it safe to say that pediatricians are relying les implicitly on milk sugar, but are inclined to split the sugar clement giving cane sugar a place of value, and dextri-maltose a decidedl prominent place, particularly in acute and difficult cases."—*W. D. Hoskins: Present tendencies in infant feeding, Indianapolis M. J July, 1914.*

"It should be . . . of lactose may cause diarrhoea. If a high . . . centage of sugar be required it is better to replace it by dextri-maltose, such as Mead's Nos. 1 and 2, where the maltose is only slightly in excess of the dextrins, thus diminishing the possibility of excessive fermentation."—*W. J. Pearson: Common practices in infant feeding, Post-Graduate Med. J. 6:38, 1930; abst. Brit. J. Child. Dis. 28:152-153, April-June, 1931.*

. . . several . . . gradual transition to a whole milk or evaporated milk formula, which will supply about one and one-half to two ounces of whole milk to every pound of body weight, is reached. This also should finally have the addition of dextri-maltose amounting to five to seven per cent."—*R. A. Strong: Summer diarrheas in infancy and early childhood, Arch. Pediat. . . .*

. . . that group of organisms thrive on) and high in protein. Calcium casei nate milk accomplishes this purpose. In our series of cases, we found it was necessary to use the casein calcium for from 5-8 days; we then stopped it and added dextri-maltose to the formula."—*A. G. DeSanctis and L. V. Paider: The value of calcium caseinate milk in fermentative diarrhea, Arch. Pediat. 38:233-236, April, 1921.*

SERIOUSNESS OF DIARRHEA

There is a widespread opinion that, thanks to improved sanitation, infantile diarrhea is no longer of serious aspect. But Holt and McIntosh declare that diarrhea "is still a problem of the foremost importance, producing a number of deaths each year. . . ." Because dehydration is so often an insidious development even in mild cases, prompt and effective treatment is vital. Little states (Canad. Med. A. J. 13:803, 1923), "There are cases on record where death has taken place within 24 hours of the time of onset of the first symptoms."

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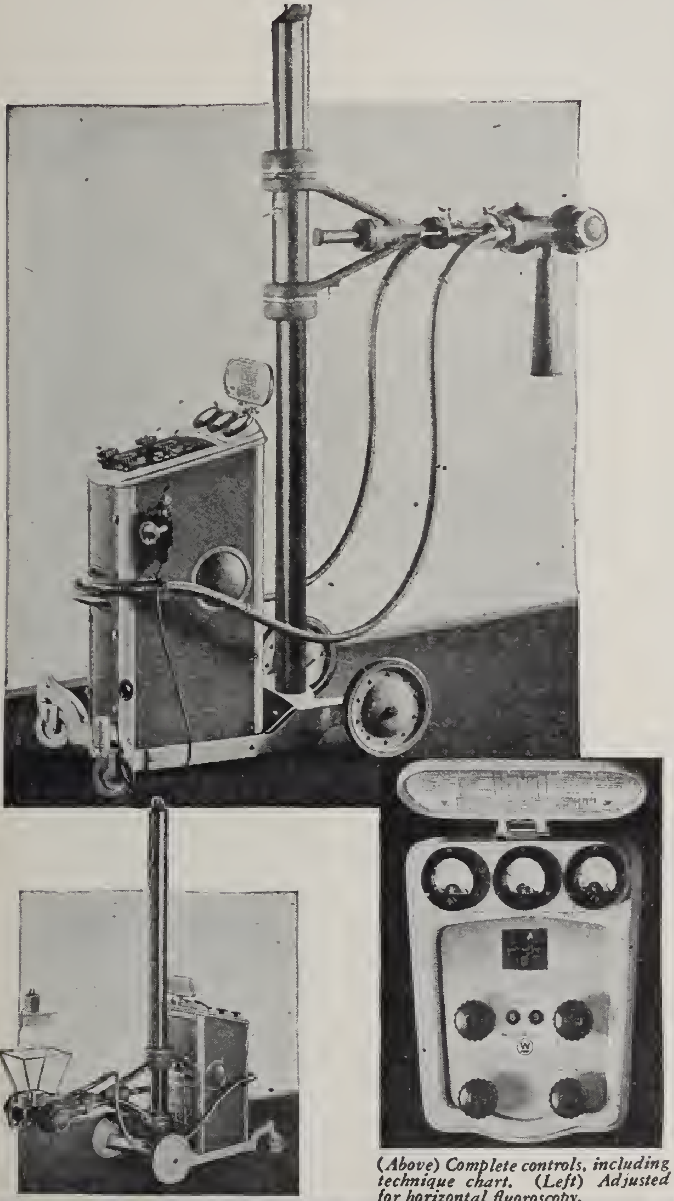

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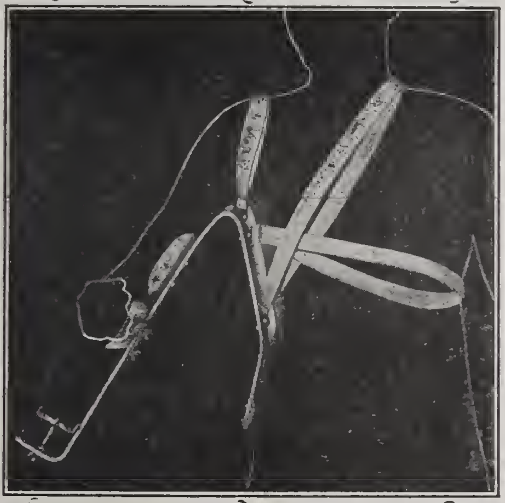

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*Martenstein, H.: Syphilis Treatment: Enquiry in Five Countries, *League of Nations Quart. Bull. Health Organ* 4:129, 1935.

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Management of Acute Neurologic Manifestations In Children*

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THE MANAGEMENT of acute neurologic manifestations in children presents one of the most difficult problems in medicine. A physician is called to see a child whose parents give a history of an acute onset with headache, vomiting, fever, lethargy and localized or generalized twitchings. Examination discloses rigidity of the neck, positive Brudzinski, Kernig and Babinsky signs and maybe ptosis or other paralysis. What is to be done? I shall outline a few general principles in the management of cases of this type although it must be remembered that every patient should be individualized.

DIAGNOSIS

Before proceeding to do anything therapeutically one naturally has to try to make a diagnosis. The most important possibilities of the cause of this symptom-complex are: (1) transitory cerebral manifestations secondary to some acute infection outside the nervous system such as tonsillitis, otitis media, pneumonia; these manifestations are usually termed meningism or meningismus(1); (2) meningitis of various types, such as meningococcus, purulent nonmeningococcus, tuberculous and even the rarer types such as mumps and syphilitic meningitis; (3) encephalitis of various types; (4) acute anterior poliomyelitis; (5) brain abscess; (6) brain tumor; (7) tetany; (8) epilepsy; (9) tetanus and rabies. If coma is present one should consider also the possibility of uremia and diabetes, brain trauma with or without skull fracture, with or without meningeal hemorrhage and finally poisoning. Occasionally the diagnosis may be made immediately, but it usually takes hours or even days to reach a decision.

A detailed history which is important in the making of any diagnosis is doubly important in the interpretation of acute neurologic manifestations. For instance, a history of otitis media or sinusitis of 10 to 12 days duration preceding the acute symptoms would speak for a possible otogenic meningitis. A history of chronic otitis media would be suggestive of brain abscess. A history of acute tonsillitis or general grippal infection would speak for transitory cerebral manifestations. A history of pertussis, measles, or even German measles immediately preceding the neurologic manifestations would point to an encephalitis. The presence of an epidemic of poliomyelitis or encephalitis in the vicinity should make one think of those diseases. A background of tuberculosis in the family should make one suspect tuberculous meningitis although tuberculous meningitis usually sets in slowly. A history of previous epileptic attacks should put epilepsy in the foreground although the present attack may be the first. A history of chronic nephritis would naturally direct attention to uremia, if the patient is in coma. A history of trauma to the head with or without cerebral hemorrhage would make one think of a skull fracture. The ingestion of poison or the onset of acute indigestion in several other members of the family would naturally point to poisoning as a cause. A previous injury with a rusty nail would speak for tetanus. A history of a dog bite would make one think of rabies.

If a detailed history is important, a thorough physical examination is even more important for diagnosis. The discovery of an acute infectious process outside the nervous system such as tonsillitis, otitis media or pneumonia would speak for transitory rather than organic neurologic manifestations. The degree of neck rigidity sometimes gives a clew to the patient's condition. In most cases of transitory cerebral manifestations the rigidity is not very marked while in meningitis it is. Discovery of ptosis or asymmetry of the face would speak for an encephalitis, brain tumor or abscess. I should like to call attention to the fact that unilateral symptoms or signs do not necessarily signify the presence of encephalitis or brain tumor, as many cases of meningitis, particularly the tuberculous type are masked by unilateral neurologic manifestations(2). It should also be remembered that even acute transitory cerebral manifestations may produce temporary paralysis(3). Absence of reflexes, weakness of one or more of the extremities and spinal tenderness would naturally speak for acute anterior poliomyelitis. Exaggerated reflexes, however, are not of diagnostic significance, as in infants and children reflexes may be exaggerated even under normal conditions. Trismus clearly points to tetanus.

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*Read before the 52nd annual meeting of the Mid-South Post Graduate Medical Assembly, Memphis, Tenn., Feb. 11-14, 1936.

The examination should also include a search for purpuric spots and petechiae on the skin and conjunctiva. If these are found, meningococcus sepsis, commonly spoken of as meningococcemia, is most probable.

The position of the patient in bed is significant: In most cases of meningitis the patient lies on his side with his knees drawn up while in encephalitis the patient usually lies on his back with his extremities extended.

The temperature is of some importance. In purulent meningitis and in encephalitis the temperature is quite high. In tuberculous meningitis the temperature is only moderately elevated. In uremic coma, brain tumor, brain trauma and epilepsy the temperature is usually normal or slightly elevated, although it may be high.

The pulse, the clinical indicatior which has been so sadly neglected by the modern clinician, may be of some help in the diagnosis. In most forms of meningitis the pulse is very rapid. In brain tumor it is often slow. In tuberculous meningitis it changes with the stage of the disease, a phenomenon pointed out by Robert Whytt who originally described tuberculous meningitis.

Attention should be paid to the respiration. In pneumonia respiration is naturally very rapid. In meningitis, encephalitis and poliomyelitis the respiration is only moderately accelerated or may even be slower than normal.

In addition to a thorough physical examination of the chest, abdomen and extremities, attention should be paid to the ears and eyes. The examination of the ears may disclose an abscess of the middle ear or a mastoiditis which may be the cause of the neurologic manifestations. The examination of the eyes may also give a definite clew to the diagnosis. Particular attention should be paid to ptosis, conjunctival hemorrhages which occur in cases of whooping cough and conjunctival petechiae which occur in meningococrus sepsis. Examination of eyegrounds may disclose choked disc, papilledema and atrophy of the retina. The presence of choroid tubercles makes tuberculosis meningitis a certainty. One does not have to be an otologist or ophthalmologist to be able to examine the ears and eyes. Any practitioner can learn it if he does it often enough.

Examination of the urine may yield valuabe information. Large amounts of albumin speak for the neurologic manifestations being uremic in character. Very small amounts of albumin may accompany any febrile condition. One must keep in the mind the fact that in acute infections of the central nervous system there is very often a glycosuria especially if convulsions are present.

Examination of the blood should be done as routine. The blood count and differential are usually of little help in diagnosis except when there is a leucopenia which would speak for a possible typhoid or the beginning of measles or when there is a stippling of the red blood cells, which would suggest plumbism. A study of the blood chemistry, as a rule, does not throw any light on the diagnosis except when tetany or spasmophilia is seriously considered, in which case determination of blood calcium is advisable as a low blood calcium would speak for tetany. The blood sugar is usually high, but that is true of most acute infections and is therefore of no special significance. Blood culture when positive is of great diagnostic importance. A positive meningococcus blood culture establishes the diagnosis of meningococcus sepsis.

The question of spinal puncture arises. Should the physician sit tight and wait for developments or should he do a spinal puncture immediately? The average young man in medicine is inclined to do a spinal puncture as soon as he observes neurologic manifestations. The older practitioner is inclined to wait. Every case has to be decided on its own merits, but, as a rule, when some infection outside the central nervous system is present, such as tonsillitis, pneumonia or otitis media, and when the meningeal symptoms are not very marked, I believe, one is justified in waiting for developments before doing a spinal puncture. On the other hand, if there is marked rigidity of the neck, a spinal puncture should be done immediately. Attention should be called to meningococcemia. If purpuric spots or petechiae are present on the body and the meningeal symptoms are of a mild degree, meningococcus serum or antitoxin should be given intravenously but no spinal puncture should be done. On the other hand, if in addition to the purpura, meningeal symptoms are marked, a spinal puncture should be done. In the last few years too many body punctures have been done. However, no spinal puncture should be postponed unless there is good reason for waiting.

If a puncture is done, the color and the pressure of the cerebrospinal fluid should be noted. A small amount of the fluid should be implanted on a culture medium as soon as it is obtained before it has a chance to become contaminated by standing. If laboratory facilities are close at hand, microscopic examination for cell count and organisms should be done while the needle is still in the spine so as to obviate the necessity of another puncture in case serum has to be given. If an immediate examination of the fluid is not possible, the needle should be removed as soon as the fluid is obtained. In all cases it is advisable that the fluid, no matter how small an amount, be collected in more than one test tube. If the first portion of the fluid obtained is clear only a small amount of fluid should be removed to avoid the possibility of precipitating a meningitis.

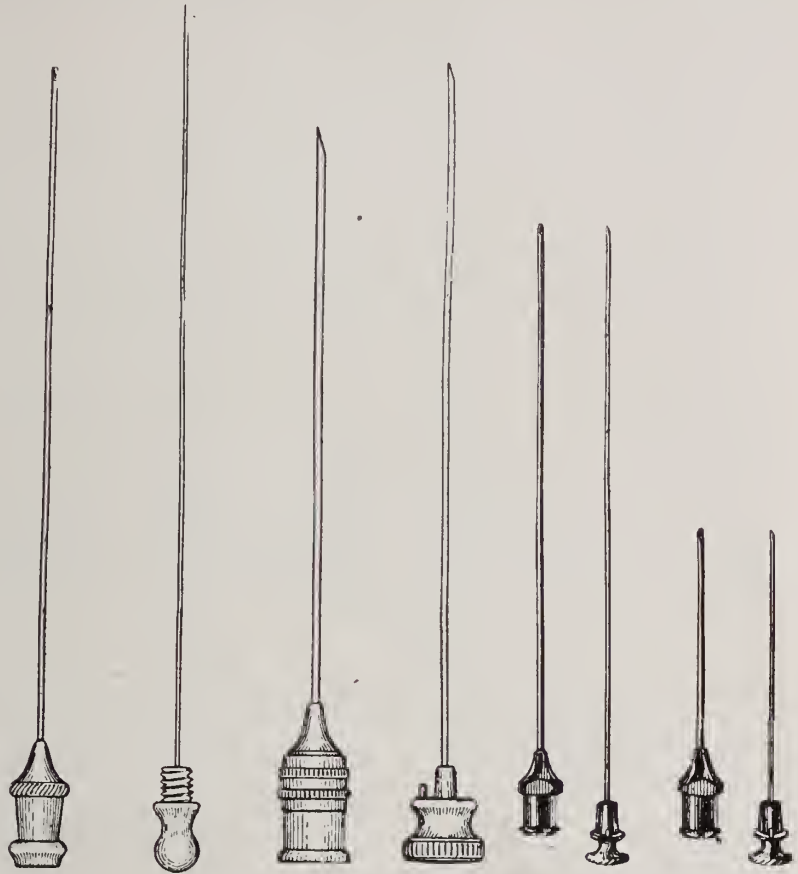

Figure 1.‡—Various types of lumbar puncture needles. The pin locks of needles b, c, and d are more practical than the screw lock of needle a. Needle d is useful for spinal puncture in infants.

The study of the fluid should include observation of a pellicle formation, tests for increased globulin, tests for reduction of sugar, special chemical tests, the determination of the number and type of cells and above all, search for organisms in direct smear and in culture.

The formation of a pellicle which at times may appear almost immediately after withdrawal of the fluid or not until 12 to 24 hours later indicates a meningitis. The type of pellicle varies with the type of meningitis.

Increase in globulin does not indicate the exact pathology of the central nervous systemn but it denotes the existence of some pathology.

The sugar determination is important for the diagnosis of meningitis, a reduced amount of sugar in the cerebrospinal fluid indicating meningitis. A high cerebrospinal fluid sugar, however, is of no special diagnostic significance. Not only may the fluid of encephalitic patients have a high sugar content, but also that of patients with acute transitory cerebral manifestations. Even in meningitis the fluid may show a high sugar content at the very onset or as we would term, the premeningitic stage. I should like to call attention to the simple method of sugar determination of cerebrospinal fluid that Cohn and I(4) recently described.

Among the special chemical tests I should like to mention the sulphosalycilic acid-mercuric chloride test, known as the Levinson test, which has been found of assistance in the diagnosis of tuberculous meningitis(5).

Both for the study of the cells and in the search for organisms the microscopic examination is of the greatest importance. In studying the cells, one should note not only the number of cells per cmm. but also the type. Of special significance is the cell termed by me the "desquamated endothelial cell."(6) The presence of this cell which is found in large numbers in purulent meningitis signifies a destruction of the meninges. In looking for bacteria it does not suffice merely to glance at the microscope. One must make a thorough search for the organism, an investigation which may sometimes take hours.

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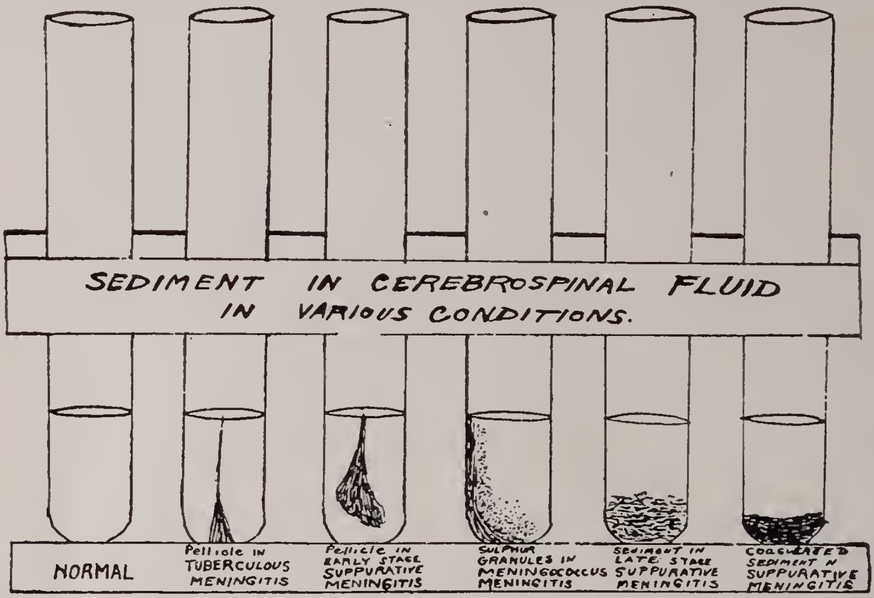
‡Figures 1, 2, 3, 4A and 4B are from the author's book "Cerebrospinal Fluid," 3rd edition, 1933, C. V. Mosby Co., St. Louis and that figures 5A and 5B are from the author's article with L. H. Harris, "Lead Encephalopathy in Children," Journal of Pediatrics, March, 1936.


SEDIMENT IN CEREBROSPINAL FLUID
IN VARIOUS CONDITIONS.
NORMAL
Pellicle IN TUBERCULOUS MENINGITIS
Pellicle IN EARLY STAGE SUPPURATIVE MENINGITIS
SULPHUR GRANULES IN MENINGOCOCCUS MENINGITIS
SEDIMENT IN LATE STAGE SUPPURATIVE MENINGITIS
COAGULATED SEDIMENT N SUPPURATIVE MENINGITIS

Figue 2.‡

A positive Wassermann and Kahn test on the cerebrospinal fluid suggests a syphilitic meningitis and should therefore be checked by a blood Wassermann.

Other means of diagnosis may be of value. A positive tuberculin test makes tuberculous meningitis a strong possibility although a negative tuberculin test does not rule out the condition, as in many cases of tuberculous meningitis the tuberculin test is negative. X-ray is an important aid in the differential diagnosis of acute infections of the central nervous system. Skull fracture may be diagnosed by X-ray although negative roentgenologic findings do not exclude brain trauma as the cause of the neurologic manifestations. Miliary tuberculosis of the lungs shown on the X-ray plate makes the diagnosis of tuberculous meningitis fairly certain. X-ray is also helpful in the diagnosis of lead encephalopathy. This form of encephalitis involvement to which attention has been called by Thomas and Blackfan, McKhann and others(7) may be diagnosed by the presence of a lead line in the long bones on X-ray.

The diagnosis of acute neurologic manifestations can be reached only by a combination of a thorough case history, physical examination and a study of cerebrospinal fluid.

MANAGEMENT

All children presenting acute neurologic manifestations should be hospitalized for, at best, the condition is hazardous and may require emergency measures at any time. Whether or not a final diagnosis has been made all foci of infection should be removed if possible. If, for instance, there is bulging of the ear drum a paracentesis should be done. As a rule, I do not advocate early incision of the drum, but whenever an inflammation of the ear is associated with neurologic symptoms the earlier the paracentesis is done the better. If the X-ray or the clinical symptoms point to a mastoiditis, early mastoid operation should be considered. If a diagnosis of pneumonia is made, treatment should be directed to the pneumonic condition.

If the meningeal symptoms are not marked and do not progress in severity it is safe to wait for developments. In the meantime, administration of fluid, especially of glucose, subcutaneously, is all that is necessary except for the treatment of symptoms as they arise, such as convulsions, headache and restlessness. If a spinal puncture has been done, the next step will depend on the appearance of the fluid. If the fluid is clear, nothing should be done unless acute anterior poliomyelitis is suspected, in which case 20 cc. of human convalescent serum should be given intraspinally if that amount of cerebrospinal fluid can be removed. If the cerebrospinal fluid is turbid, antimeningococcus serum or meningococcus antitoxin (Ferry) should be given immediately intraspinally without waiting for bacteriological examination.

The subsequent treatment will depend on

the final diagnosis.

SERUM TREATMENT

If meningococci are found in the fluid or even if no meningococci are present but no other organisms have been discovered, and if the fluid is turbid, large doses of anti-meningococcus serum or of the Ferry antitoxin or a combination of both should be given energetically. This is to be continued until the temperature becomes normal, the meningeal symptoms subside and there are no bacteria in the cerebrospinal fluid, or until the case has been proved to be nonmeningococcic in type. In all of these cases, especially when there are purpuric spots of petechiae, and particularly if the blood culture is positive, antimeningococcus serum should be administered both intravenously and intraspinally. I should like to call attention to the intramuscular administration of antimeningococcus serum. My recent work makes me believe that intramuscular administration of antimeningococcus serum is a valuable aid in the treatment and may be used to advantage in conjunction with serum given by the other two routes.

If the case proves to be one of pneumococcus meningitis, pneumococcus serum type 1 or 2 may be given, although this serum is not nearly as effective nor as certain as antimeningococcus serum. It should be given early as the disease may be too far advanced if one waits for the result of typing. Unfortunately, pneumococcus meningitis is usually caused by pneumococcus type 3 or 4 for which there is no serum.

There are several reports in the literature of recovery after the administration of influenza meningitis serum. Since there is nothing to lose as otherwise the prognosis is practically hopeless, the serum should be used One type of the influenza meningitis serum is prepared by Dr. Josephine Neal and another by a commercial house.

An occasional recovery from streptococcus meningitis has been reported in the literature after the administration of polyvalent streptococcus serum. Recovery from staphylococcus meningitis has been reported through the use of bacteriophage.

Convalescent serum given intravenously and intraspinally has thus far not been effective in cases of meningitis, but it is worth a trial

Convalescent serum has been used extensively in acute anterior poliomyelitis. Park and his associates, Kramer, Landon and others saw no improvement from the administration of convalescent serum. On the other hand, its use sometimes results in a striking drop in temperature. I would therefore advise to use it. However, no less than 100 cc. of it should be given; 80 cc. intravenously and 20 cc. intraspinally, if sufficient cerebrospinal fluid can be withdrawn. It should be given in the preparalytic stage.

NOURISHMENT

One of the most important problems in the management of acute infections of the central nervous system is that of supplying nourishment to the patient.

Those who can swallow should get a high caloric diet and water in large quantities. Those who cannot swallow, because they are either comatose or drowsy should get glucose subcutaneously, intramuscularly or intravenously. As high as 10 per cent of glucose has been given subcutaneously without sloughing. However, it is not safe to give more than 5 per cent glucose by this route. Intramuscularly, 10 per cent glucose may be given. Intravenously, anywhere from 10 to 50 per cent glucose may be given, preferably by the drip method. In administering serum intravenously, it is advisable to give it in 100 or more cc. of 10 to 25 per cent glucose. This lessens the chances of untoward reaction because it dilutes the serum and at the same time supplies nourishment to the patient.

Some advocates of poliomyelitis serum advise against its administration together with glucose because in case of a reaction it is hard to tell whether the reaction is due to the serum or to the glucose. This object, however, is so minor, that I believe it advisable to give serum intravenously in glucose.

Rectal feeding may be utilized for a short while but if repeated too often it irritates the rectum and causes the development of tenesmus.

There is one condition in which lavage by the nasal route is indicated and that is in the bulbar type of polioencephalitis, where the patient is not drowsy, and yet he cannot swallow any food. In this type of case, the introduction of a catheter into the stomach constitutes a good medium for supplying food to the patient. For infants and very young children an ordinary catheter 12 to 14 gauge may be used. In older children a Levine tube should be used. I have fed children with bulbar polio-encephalitis for a week or longer by the nasal route.

Dehydration—Normal saline has been used to combat dehydration. I have been using Hartman's solution as it combats either acidosis or alkalosis because of its buffer action. It also supplies other minerals.

Blood Transfusion—Blood transfusion has been used with good results by many clinicians in the treatment of infections of the central nervous system. Through blood transfusion the body is supplied with both nourishment and antibodies. Considering the fact that there is an increased meningeal permeability in meningitis, it is conceivable that the antibodies supplied by blood transfusion will enter the subarachnoid space much more easily than they would normally. Blood given intramuscularly has the effect of a foreign protein, but naturally it is not as effective as blood given intravenously.

SYMPTOMATIC TREATMENT

Convulsions, severe headache, restlessness and coma are the most important symptoms requiring energetic treatment. **Convulsions**—Convulsions are an expression of the revolt of the brain against some infection or toxin. When convulsions occur, they call for drastic action. The immediate treatment is the same no matter what the cause. The patient should be put in a plain or mustard bath and then covered by blankets, and hot bags should be applied to his body. Dilating the rectum in infants and young children is not to be recommended. Nor do I use any mouth gag during convulsions, if there is a possibility of the convulsions being epileptic in character. At no time should one try to force the mouth open to put in a gag as the force it takes to open the mouth during a convulsion may break a tooth and even the jaw. If the convulsions repeat themselves chloral hydrate rectally 10 to 15 gr. to a child 1 to 3 years of age is useful. If they occur very often and are very violent, avertin and magnesium sulphate should be used.

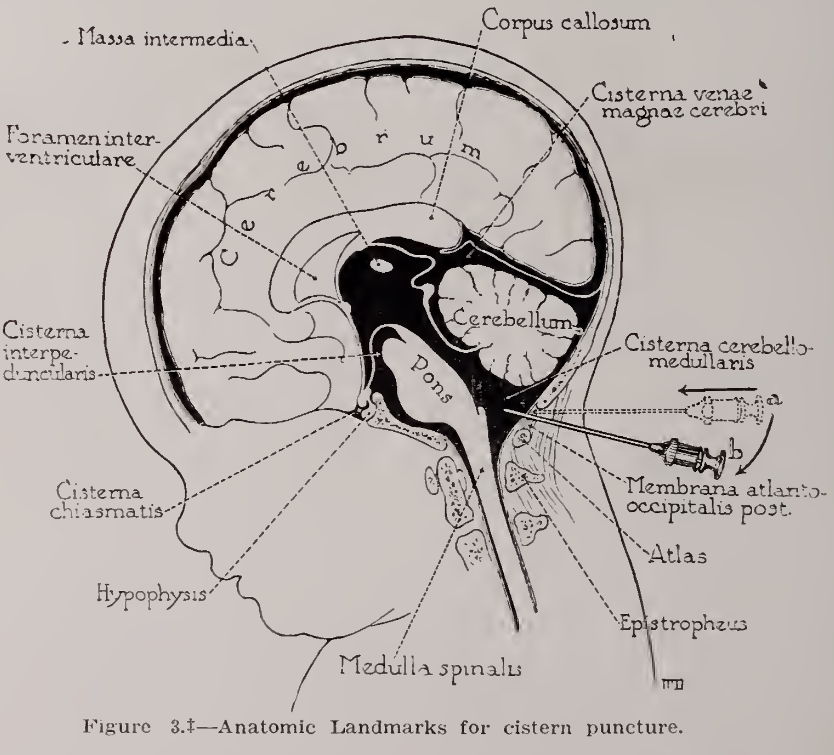

Massa intermedia
Corpus callosum
Cisterna venae magnae cerebri
Foramen interventriculare
c e r e b r u m
Cerebellum
Cisterna interpeduncularis
Pons
Cisterna cerebello-medullaris
a
b
Membrana atlanto-occipitalis post.
Cisterna chiasmatis
Atlas
Hypophysis
Epistropheus
Medulla spinalis

Figure 3.‡—Anatomic Landmarks for cistern puncture.

Spaeth(8) has found avertin useful in reducing convulsions in tetanus. I have found it effective also in other types of convulsions. Deaths resulting from the administration of avertin have been reported. So far I have not seen any deleterious effects from its administration. I use 80 mg. per pound as the standard dose although I have used as high 100 mg. per pound. The advantage in the use of avertin is that its effect wears off within 8 to 10 minutes. In preparing avertin one must make certain that it is well dissolved in the water.

Magnesium sulphate has been found of value in abating convulsions. However, in nephritis, particularly the chronic type, it may be deleterious. It should therefore be used only in cases that do not suffer from uremia or nephritis. It may be given either intravenously, or intramuscularly.

At the Cook County Hospital magnesium sulphate is given according to weight as follows: intravenously, 1cc. of a 25 per cent solution per 10 kg. of body weight; intraspinally, ½ cc. and intramuscularly, 2 cc. per 10 kg. every eight hours. There is a certain degree of risk involved in the intravenous and intraspinal administration of magnesium sulphate; the intramuscular route is therefore preferable.

Headache—Caffeine has been used for many years for the relief of headache. We have found it very useful for headache in acute infections of the central nervous system. We give 2½ to 3 grains hypodermically to a child

3 to 5 years of age.

The value of hypertonic glucose in relieving increased intracranial pressure has been questioned of late. It has, however, been found useful, clinically. 100 cc. of a 25 per cent solution given intravenously by the drip method is valuable. Spinal puncture may have to be resorted to for relief of severe headache in encephalitis and meningitis.

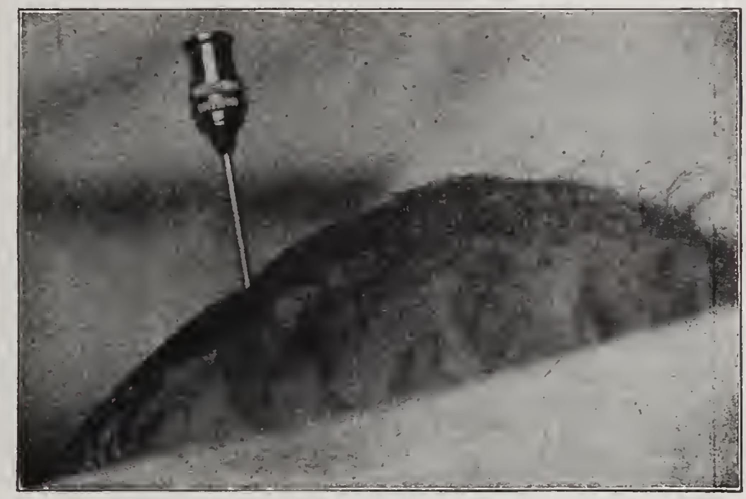


Figure 4A.‡—Photograph showing ventricular puncture in infant. (Side view)

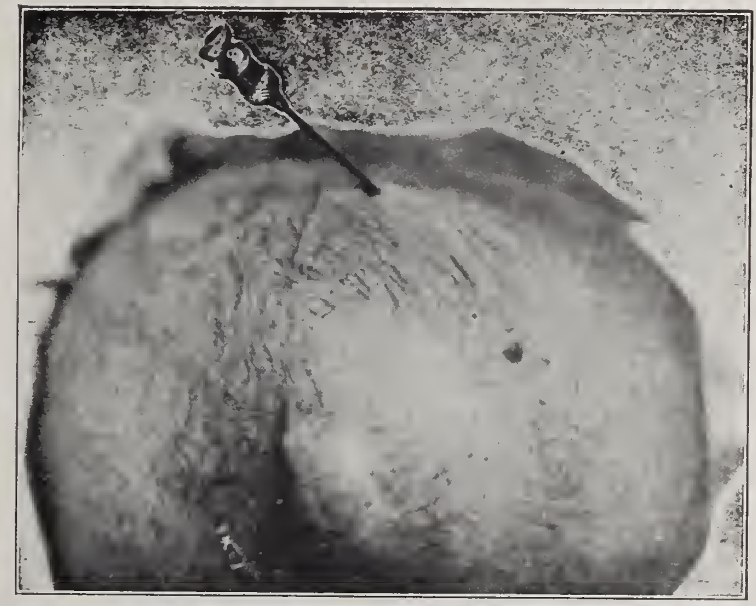


Figure 4B.‡—Photograph showing ventricular puncture in infant by way of the left fronto-parietal suture.

Restlessness—practically all patients suffering from acute infections of the central nervous system are very restless and should be given sedatives. The old method of letting the patient struggle without medication wore out the patient unnecessarily.

Sodium amytal, 3 gr. every 3 to 4 hours for a child 5 to 10 years old usually induces rest. Chloral hydrate in 10 to 15 gr. doses rectally induces sleep. It should be remembered that chloral hydrate raises the blood sugar. Morphine should be used only when other drugs fail, as it raises the spinal fluid pressure and also masks the symptoms.

Cardio-respiratory Collapse—Adrenalin, caffeine, atropine, oxygen-carbon dioxide and camphor in oil may be resorted to for cardiorespiratory collapse. Neither strychnine nor picrotoxin is advisable because of their convulsant effects.

Coma—There are no special drugs necessary unless it be insulin.

Thecal Drainage—Drainage of the cerebrospinal fluid is indicated in all conditions where there is increased intracranial pressure.

In all cases of meningitis, repeated punctures are necessary, first, in order to decrease the intracranial pressure, secondly, in order to remove as many bacteria as possible from the ventricles of the brain and the subarachnoid space of the brain and spinal cord, and thirdly, to make it possible to introduce serum whenever necessary. In encephalitis and in acute anterior poliomyelitis, repeated punctures should be done only when there is increased intracranial pressure.

Lumbar and Cistern Puncture—Lumbar puncture should be the first line of attack for the purpose of drainage.

Cistern puncture is of no value in the diagnosis of meningitis, as indicated by the studies of Cohn and myself. Therapeutically, however, it is very valuable, and should be done at one time or another in all cases of purulent meningitis. Ventricular puncture may be resorted to in infants before the anterior fontanel is closed.

SPECIAL METHODS

Acute transitory manifestations usually subside within 24 to 48 hours without any special treatment. Most cases of encephalitis either recover by symptomatic treatment or by thecal drainage. Likewise most cases of poliomyelitis recover without any special methods of treatment. Patients suffering from meningococcus meningitis usually recover by serum treatment. Patients suffering from purulent meningitis and tuberculous meningitis and an occasional case of encephalitis require special heroic treatment. The following procedures have been advocated.

Drainage by Hypotonic Solution—Kubie(9) reported good results with continuous drainage in the treatment of purulent meningitis. Our results with this method have not been very good. Yet it does clear up the fluid and apparently makes the patient more comfortable for a while. The trouble with continuous drainage is that the needle gets clogged up. Edema of the face is also noted not infrequently. Continuous drainage has been advocated by Retan(10) for poliomyelitis. However, it is usually unnecessary to do continuous drainage in poliomyelitis as there is no markedly increased intracranial pressure after the first few hours. It may be valuable in encephalitis, however.

Forced Encephalographic Drainage—Drainage may be accomplished by displacing the cerebrospinal fluid by air or other gases. This may be done by introducing air into the lumbar region through a needle, employing general encephalographic technique. Forced drainage by displacement has given good results in some instances, at least, providing temporary relief. On the other hand, there is danger of producing a subarachnoid hemorrhage by this procedure.

Continuous Drainage by Catheter—Continuous drainage of cerebrospinal fluid may be accomplished by introducing a ureteral catheter through a 13 gauge needle and leaving it in the spinal canal. Hundreds of cc. of cerebro spinal fluid may be removed this way.

Surgical Drainage—Laminectomy has been advocated in meningitis but it should not be used except in cases of complete subarachnoid block.

Lumbar—Cistern Lavage—Spinal-cistern lavage with normal salt solution has been employed. Perlstein and I(11) used spinal-cistern lavage with mercurochrome and metaphen on dogs. We found mercurochrome to be fatal in any bactericidal dose, while metaphen was harmless in certain bactericidal doses. We are not yet ready, however, to recommend metaphen lavage in purulent meningitis in human beings, although the method holds out some hope.

Ethyl Hydrocuprein Hydrochloride Intraspinally—Mention should be made of the use of ethyl hydrocuprein hydrochloride (optochin) in the treatment of pneumococcus meningitis. Kolmer and Idzumi recommend lumbar puncture once or twice a day, followed by the intraspinal injection of a warmed sterile 1:1000 solution of ethyl hydrocuprein hydrochloride in normal salt solution, one-half cc. of the solution being injected for each kilogram of body weight.

Enthusiastic reports have appeared in the literature on the use of ethyl hydrocuprein hydrochloride either alone or in combination with serum. In most cases, however, the drug is not effective. Loss of vision has been attributed to its use.

Intracarotid Injections—Intracarotid injections are advocated by Kolmer and have been used with some success. This method of treatment is employed with a view toward bringing the remedy into immediate contact with the site of infection in the maximum concentration possible. The substances used are acriflavin base, colloidal solution of iodin (Pregl's solution), pneumococcus antibody solutions, and pneumococcus serum. There are some reports of recovery from the intracarotid treatment although there are definite criticisms of its use.

Autogenous Cerebrospinal Fluid Intramuscularly—Autogenous cerebrospinal fluid has been used intramuscularly in purulent nonmeningococcic menigitis with some degree of success. We did not find it of value.

FOLLOW UP

The management of acute neurologic manifestations does not end with the subsidence of the acute symptoms. These patients should be kept under observation for a long time as there is no telling what complications or sequela may develop. Repeated spinal punctures and even encephalography may have to be resorted to in the treatment of these sequela.

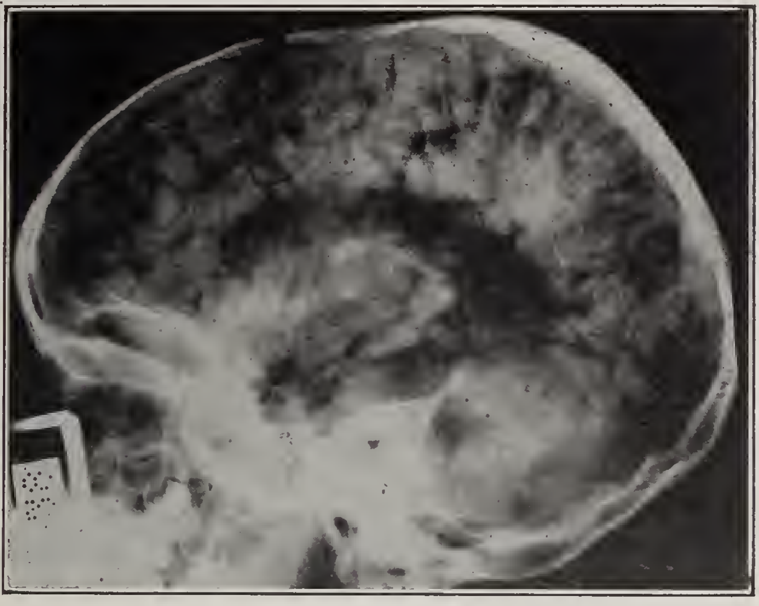


Figure 5A.‡—Encephalogram showing extensive cortical atrophy in case of lead encephalopathy in less than two months after onset of disease (lateral view).

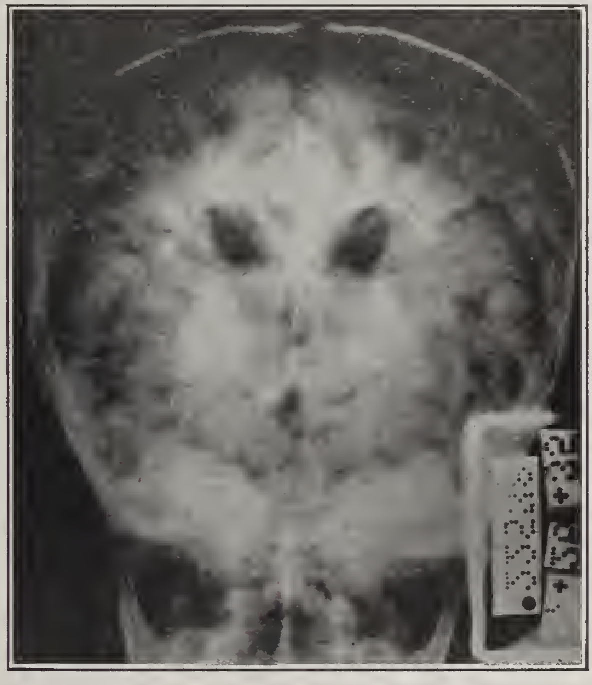


Figure 5B.‡—Encephalogram showing extensive cortical atrophy in case of lead encephalopathy in less than two months after onset of disease (anteroposterior view).

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Fracture of the Hip In the Aged

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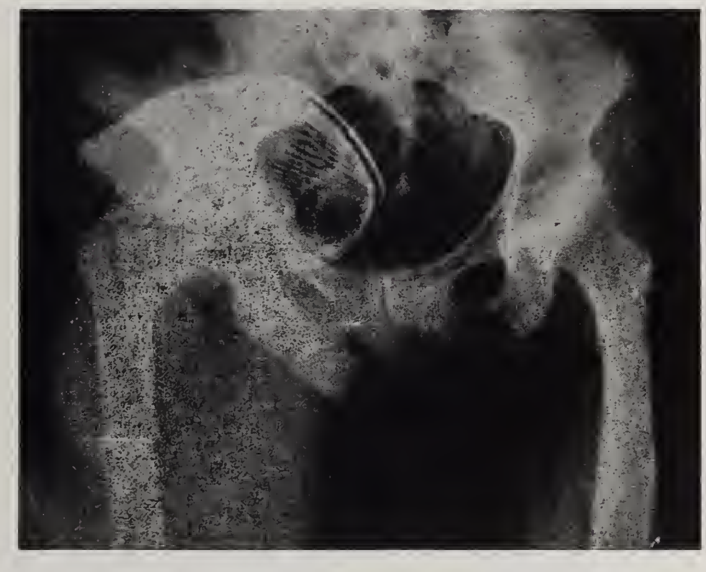
I heard progress shriek in more piercing and despairing tones than freedom used when Kosciusko fell, as I saw this subject presented in a leading medical journal, this year, 1935, under a caption that proclaimed it as an unsolved mystery. The text of the article was even more deadly than the title indicated as it purveyed statements that might easily be compared to those found in text books written before the antiseptic era. The same publication contains another essay on the same subject in which the author contrives more completely to shroud this alleged mystery by introducing a maze of intricate and superfluous detail which adds to the confusion and diminishes the slim chances of success of those who attempt to follow his procedure. Verily "there are none so blind as those who will not see."

For about ten years I have sought in vain to enlist consideration by the constituted authorities of a plan that has proven in my hands as near perfection as is possible for human efforts to approach, proof of which has been submitted on numerous occasions, evidence piled upon evidence sufficient to convince the most cynical dissenter. But for apparently selfish or other sinister reasons they have met my overtures with an attitude of stolid and stupid indifference. Evidently they possess neither the hepatic pigmentation nor the convolutional complexity to face fairly the issue or maybe there is too much green and yellow in the color scheme of their chromosomes. Skepticism and criticism are both welcomed by the sincere investigator because they are essential to the preservation of the purity of science but no man with lofty motives and humane purposes can supinely endure the invidious condemnation of oblivion. I am, therefore, crusading in the cause of those unfortunate victims who fall beneath the twin blights of age and physical disaster. And in addition are further penalized by being consigned to sepulchres of plaster of Paris, or crucified on crosses of skeletal traction.

The injury, herein considered is so frequent that I doubt very much if there is one person in this audience who has not had the bitter experience of watching some near relation in advanced life suffer the exquisite torture inflicted by its dreadful consequences. For that reason alone I am hopeful that I can succeed in awakening the inquisitive spark that may be fanned into a flame of vital interest.

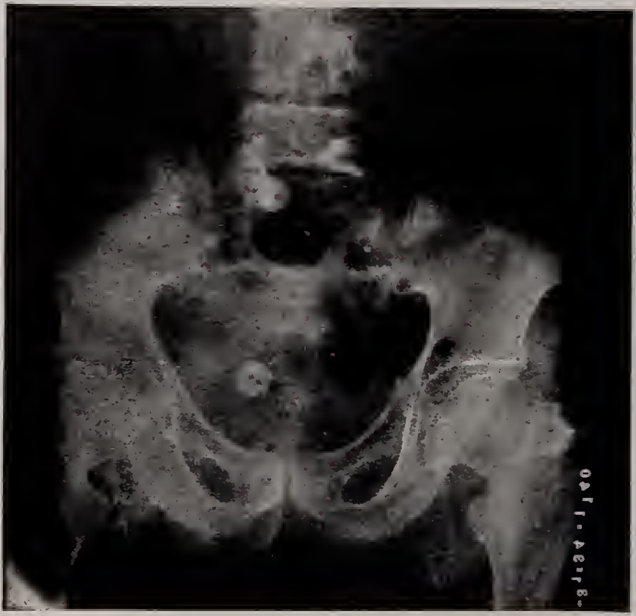
My experience now includes seventy-eight cases ranging in age from sixty-two to eighty-six years. There have been eight deaths that occurred within sixty days of the operation or a mortality of 10.2. In none of these could the fatality be ascribed to the operation or the injury in a proximal sense. In each instance diseases prevailing at the time of injury could be reasonably charged with the patient's death. In two patients there was infection of a serious nature following the operation.

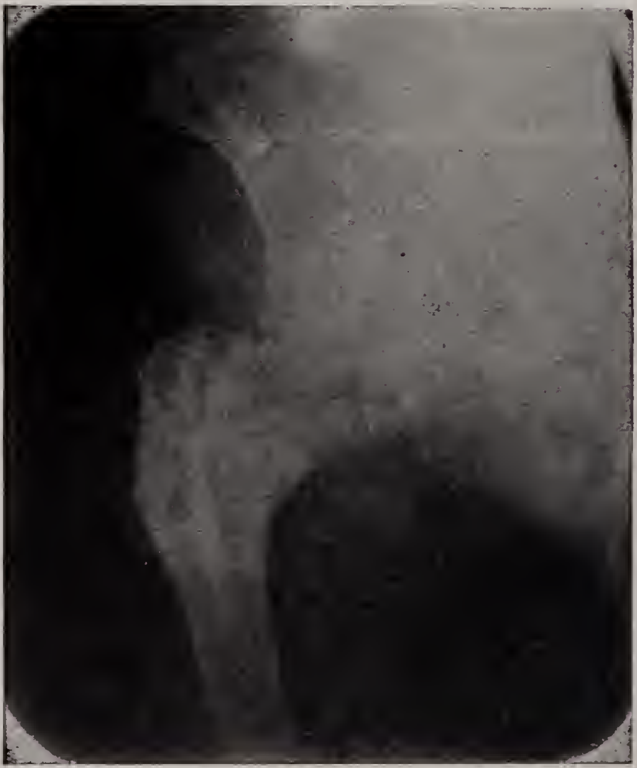
One was an opium addict who had multiple abscesses over his body as the result of needle punctures. This patient has an enormous purulent degeneration at the site of operation and died in three months from general sepsis. One other patient who was very large and fat had an abscess in the superficial tissues which drained and healed very promptly without retarding the patient's recovery. I have one patient now who has been in the hospital more than a year because she had no other place to go. In none of my survivors has there been more than one inch of shortening. In none has there been no--union, no patient remained in bed more than four weeks except those who suffered from independent disease. The time elapsing between the reception of the injury and the operation varied between four hours and twenty-six months. Six patients had tried "orthodox" methods with failures. In none of my patients was there any external methods of immobilization used beyond a sand bag along either surface of the limb and one other, noted further on. No form of restraint was employed either moral or physical. The patients were all allowed to assume any position in bed that suited them best. Frequent changes in position seemed to add much to their comfort and nurses were permitted to turn them any way they chose to facilitate care and hygiene. The presence of pressure necrosis was almost eliminated. It occurred only in a few cases that were difficult to move about on account of their weight and natural inertia, or congenital fatigue. Usually by the ninth day patients voluntarily flex the injured leg to a 45 degree angle while lying on their backs, and all could lie comfortably on one side. They are allowed to sit up as soon as the effects of the anesthetic has worn off. In four cases there was aseptic extrusion of the key. It appeared to press against the overlying skin. Under novacaine an incision was made through which the key was lifted out with hemostatic



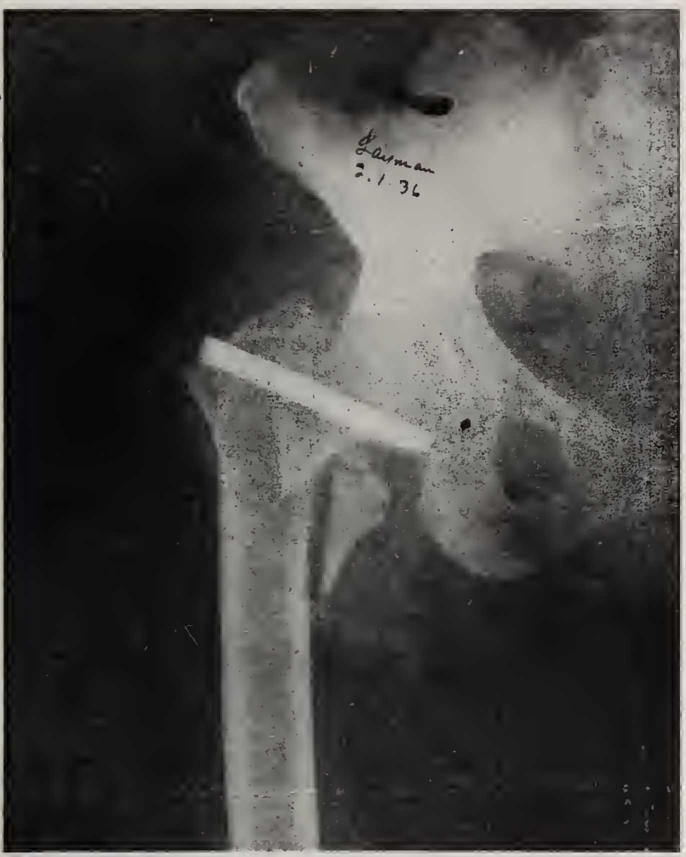
forceps. In every case this occurred after union of bone was complete and no unpleasant consequences resulted.

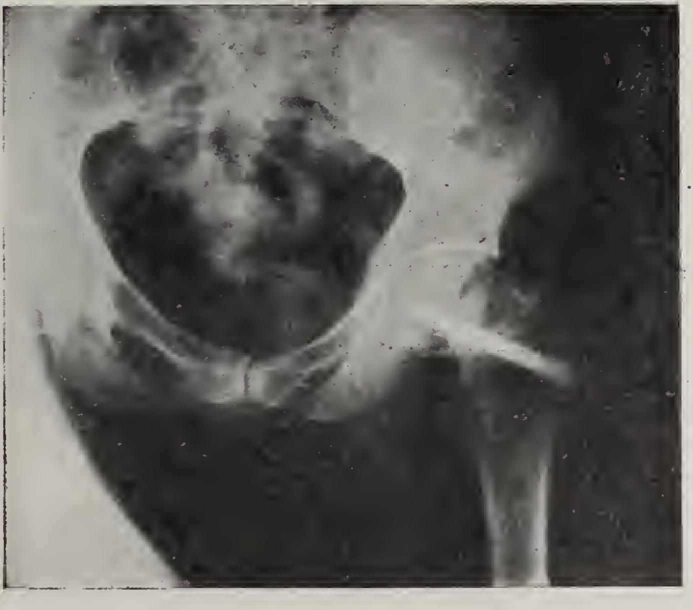
The different types treated were cervical, intratrochanteric, subtrochanteric and comminuted fractures, neither variety seemed to present any special difficulties or show any tendencies toward slow union. I do not recognize impaction as an entity because experience teaches me that it is a dull piece of fiction born of fatuous optimism. The operation for subtrochanteric fracture requires about thirty minutes; double the amount of time consumed in the other varieties. Average time is fifteen minutes. The comparative absence of post-operative pain or shock was doubly a gratifying feature in every case, some of the patients requiring no morphine whatever. The majority had to have one or two hypodermics of a sixth or a quarter in twenty-four hours for a few days. The psychoses so frequent in old people after injury was controlled by



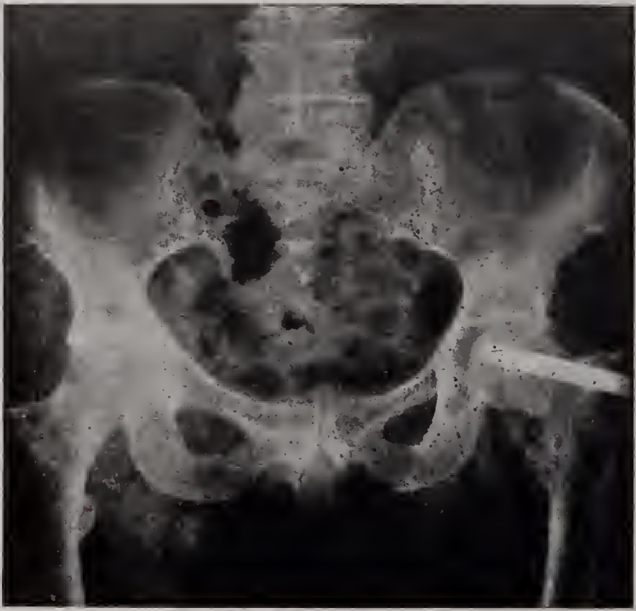


gramme doses of sodium thiosulphate intravenously administered. In a week they were allowed to get out of bed in a wheel-chair but were permitted to sit up in bed the day after the operation if they so desired. The use of crutches varied in time with the age and personality of the patients, some proving to be courageous and self reliant. This type used their crutches and became experienced in weight bearing in as short a time as two weeks and met with no untoward effects, while others who were further advanced in years and very timid and apprehensive were much longer in beginning to stand upright under any circumstances. I had one patient who walked to my office using only a cane and paid his bill in





four weeks from the operation. He had formerly spent ten months in a plaster spica on account of a fracture of the neck of his femur and the best he got was a non-union and a flock of bed sores. In four weeks after my operation union was sufficient to support his weigth in locomotion. One patient had delirium tremens following his operation and got out of bed the first night and walked about the ward, without notable consequences. One was an epileptic of the grand mal type who suffered several seizures during her convalescence without any evil effects as far as her fracture was concerned. One patient of a colleague suffered a fall six months after her operation for a fracture of the neck and sustained a subtrochanteric fracture of the same leg without in the least disturbing the original injury which had united perfectly.



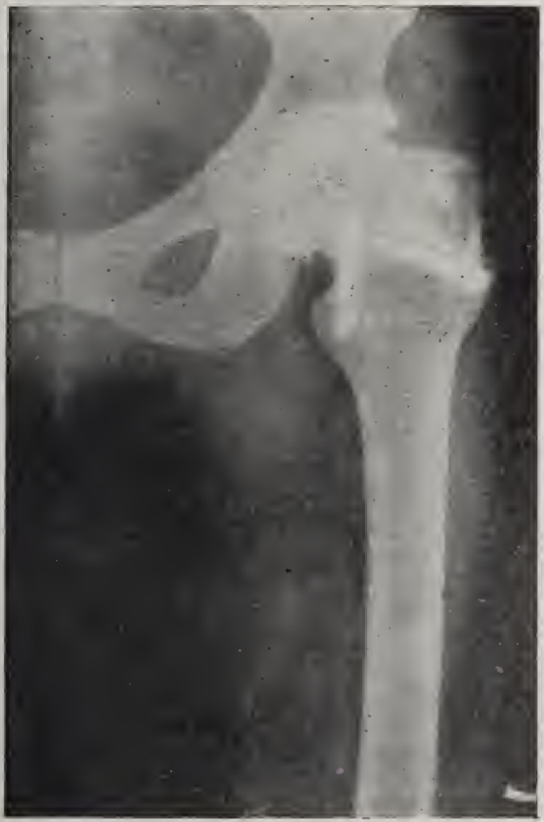
I am now presenting a specimen obtained from a patient seventy-six years of age which shows complete union although only four weeks have elapsed from the date of his operation to the autopsy. The mechanical imperfections revealed by this specimen serve to emphasize the soundness of the principles upon which the operation is founded.

This man suffered so severely from a prostatic hypertrophy and his condition otherwise seemed so excellent that a prostatectomy was done and he died five days later from a pulmonary embolism that was disclosed at the post-mortem. A total of eight deaths in sixty days in 78 cases is quite sufficient evidence to prove that the operation is devoid of mortality because insurance statistics demonstrate that eleven per cent of people between 62 and 86 die whether they break their hips or not. It must be appreciated that people between those ages have reached the fragile stage of their existence and the best that can be done is to conserve their comfort without too much thought of restoring their usefulness. I had one patient who was hemiplegic and unable to walk. He broke his hip by falling out of a wheel chair. He lived four months after operation and was able to resume his chair in four weeks and spent his days in comparative comfort. In no other way could this man have been properly cared for. I had another patient who had carcinoma of the uterus. Her hip was broken in lifting her either on or off the bed pan. I operated and immobilized the fracture enabling the nurse to provide for her care and comfort as long as she lived, which was several months. I had one patient, age 68, who labored under the disabilities of a fracture of the neck of the femur two years and two months before I operated. He obtained sufficient union after the operation to permit him to walk with a cane and resume his duties as owner and administrator of a large sanatorium for the treatment of nervous disease. This man had an aseptic extrusion of the key about six months after the operation. Union had by that time become established and no serious consequences were noted.

My experience has convinced me that the presence of the extraneous bony substance not, withstanding its heterogenic origin, promotes the activity of the osteogenetic processes in bone fragments. I am not prepared to offer any final explanation for this phenomenon but I am sure there are two ingredients that may safely be accepted. The first and most important is that the circulation in the adjacent soft tissue from which bone derives the major portion of its nutrition is not impaired or even embarrassed as it is when external means of immobilization are employed. The second may be that the key being bony substance and containing calcium in abundance and being in close approximation to the lesion may supply this very essential mineral constituent to meet the extra demand.

The device which I employ and which in a mood of innocent vanity and harmless conceit I decided to call a Key is made of beef bone 3-8 of an inch square at one extremity, 3½ inches long and tapers to 2-8 of an inch at its smallest end. The taper is important for two reasons: if it becomes mobilized it will move outward instead of inward, and it facilitates insertion.

The name Key itself has been the recipient of cordial comment. One critic in particular in his zeal for disparagement by inuendo displayed such prodigious verbal myopia that I was reminded of the man who thought a pile driver was a surgical instrument or the one who thought Lansing, Michigan was an operation. The word admits of more phases of application than any other three letter word in the English language. I counted fifty-seven, exclusive of proper names.



The details of the operation have been described and published on numerous occasions but it may not be amiss to repeat the description here for the sake of convenience. The X-ray film is placed in the shadow box in the operating room. The Key which we designate as No. 5 is measured against the picture of the hip joint as shown in the film to get the proper length, which should be the distance from the surface of the bone at the trochanter major well into but not through the head of the femur. In most cases 3½ inches, the length of the key, is sufficient. If it should prove too long it should be sawed the right length before it is introduced. The patient is placed upon an ordinary operating table and anesthetized with nitrous oxide gas. The two limbs are placed parallel in symmetrical positions and held by an assistant. A longitudinal incision is made over the trochanter and its base exposed. The operator should then take a good look at the film in the shadow box to get his sense of direction. A counter sink ¼ of an inch deep is made at the base of the great trochanter into which the little end of the key is set and with a raw hide mallet it is driven through the neck and into the head of the bone. No holes are bored or drilled. The fingers and thumb of the left hand can be held simultaneously against the anterior and posterior surfaces of the neck to detect any vagrancies of the key as it is being driven home. The incision is then closed with through and through silk worm gut sutures deeply situated. Ligations are never necessary and no cat gut need be used. A simple gauze dressing is applied over the incision and the patient is returned to bed and left there to assume whatever position he may find most comfortable. A sand bag is laid along either side of the injured limb and seems to add to the comfort of the patient to a considerable degree. The keys are made for me by Theodor Tafel, 319 Third Street, Louisville, Kentucky, and are kept in a 4 per cent solution of carbolic. They are taken out and boiled ten minutes before using.

In subtrochanteric fractures a hamsplint of board four inches wide and three feet long held to the posterior surface of the injured leg by interrupted four inch muslin bandages, adds to the patient's comfort and facilitates the necessary manipulations.

Yellow Fever In Mississippi 1878-1905

HARRIS ALLEN GANT, M.D.

Columbia, Tenn.

Chapter II

With the exception of a few cases in 1879, and 270 cases and 12 deaths at Biloxi, in 1886, and the 13 cases and 5 deaths, or as some reports have it, 14 cases and 7 deaths, at Jackson, in 1888, there was not any yellow fever in Mississippi, as stated in the preceding chapter, from 1878 until 1897. This period of nineteen years exemption was characterized by marked progress, and improvement along all lines in the South, and especially in Mississippi. The South had emerged from the rule and domination of the negroes, scalawags, and carpet baggers, of reconstruction days, and the whites had gained complete control of the Government of the States. It was a period of Renaissance and forward movements. Electric lights, telephones, and other inventions had come into practical use. The Wright brothers were working on flying machines; Marconi was developing wireless telegraphy; Roentgen, the X-ray; Madame Curie was studying radium; and Henry Ford with the automobile was just in the offing. Mississippi was gaining in population, and her railroads, factories, and other industrial institutions were prospering. Cotton and other farm products were bringing good prices, and the farmers were thriving.

The sanitary condition in the State was immensely better than in 1878. Piped water and sanitary closets were in use. In 1879 the Board of Health had adopted rules of local and general quarantine, as formulated by the National Board of Health. County Boards of Health had been discontinued. and a health officer appointed for each county in the State, whose duty it was to look after sanitary matters and report all contagious or infectious diseases to the State Board of Health. In 1880 the State Board took charge of collection of Vital Statistics and in 1882 a law was passed regulating the qualification of candidates for license to practice medicine. In 1892 the Board of Health was re-organized, and a number of younger men placed on it by Governor J. M. Stone. The result was a higher standard of requirements for license to practice medicine, and more up-to-date doctors. The Board was very interested and active in the enforcement of all measures, looking not only to the improvement of the sanitary condition of the State but also to the elevation of the standard of practitioners of medicine. Patent medicine vendors and irregular quack doctors were run out of the State, or caused to cease their vocations. The Board had to contend with smallpox in many places in the State and quite a lot of typhoid fever, measles, whooping cough, diphtheria, and scarlet fever.

Personally, I may say that I had prospered fairly well, pursuing my practice in Water Valley. I had married in 1888; had accumulated some property, and had a very comfortable home. In June, this year, 1897, together with Dr. S. R. Dunn, of Greenville, and Dr. Walton S. Green, of Aberdeen, I was sent by the Board of Health as a committee to Washington to interview the Honorable John Sherman, Secretary of the Treasury, about the management of the National Quarantine Station on Ship Island, in the Mississippi Sound, about which considerable complaint had been made. The National Quarantine Station had formerly been on Chandeleur Island, but a gulf storm in 1891 had wrecked the plant, and the station had been moved to Ship Island, about 15 miles out from Biloxi, and 20 miles from Ocean Springs. We failed to convince Mr. Sherman that there was any danger of infection from Ship Island and he positively declined to have any changes made, other than to recognize the practique of vessels that had been inspected by the State quarantine officers on Cat Island. At this time there was quite a lot of dissatisfaction with the management of the Ship Island Quarantine Station, and Dr. A. C. Smith in charge of that station was charged by Dr. Haralson, of Biloxi, representing the State Board of Health on the coast, with having allowed Ocean Springs to become infected through his station. Such was the state of feeling, when along in the latter part of July and through the month of August, 1897, there were many rumors of yellow fever in New Orleans, and a very alarming report of many cases of fever in Oceans Springs, the exact character of which was not definitely settled. It was said that the doctors had treated as many as 400 cases of the prevailing fever, most of whom called it dengue.

Ocean Springs, a town of about 1700 permanent inhabitants with several thousand visitors during the summer season, is situated on the Gulf of Mexico, nearly half the distance from New Orleans to Mobile on the Louisville and Nashville Railroad. The town is noted for its soft, salubrious atmosphere, its beautiful drives, and its facilities for sea bathing, as well as for famous mineral springs.

I was called on the 5th of September, Sunday night, 1897, by the executive committee of the State Board of Health to go to Ocean Springs, Mississippi, to investigate the fever there prevalent, a full account of which is recorded in the following report to the State Board of Health at that time.

REPORT

"In response to a telegram from Drs. Haralson and Hunter of the Executive Committee State Board of Health, I left Water Valley on the night of the 5th of September, and arrived at Ocean Springs about 1:30 p. m., September 6. A meeting of representatives of the Boards of Health of Mississippi, Louisiana, Alabama, and the Marine Hospital Service, had just a few hours before, after a thorough investigation and two autopsies, pronounced the prevailing disease yellow fever, which had been previously twice pronounced dengue. About 4 p. m. same afternoon, I had a message from the Executive Committee asking me to remain at Ocean Springs and take charge of the place for the State Board of Health, which I agreed to do. There was great excitement, and much feeling in the town against the action of the health authorities for pronouncing the disease yellow fever. I immediately asked for a meeting of the City Board of Health, and Mayor and Board of Aldermen, at which the situation was freely discussed and hearty cooperation of the city authorities with the State Board of Health agreed upon. Measures were instituted and committees appointed by the city to clean up the town and thoroughly disinfect houses where the fever had prevailed, and to isolate the sick; disinfectants to be furnished by the State Board, which were ordered at once. A house to house canvass of the town was ordered and a census taken, giving a complete list of the sick, by the city at suggestion of the State Board. About 10 o'clock that night I had a telegram from the Executive Committee asking me to see that a cordon was placed around town. Dr. O. L. Bailey, having had instructions to take charge of this work, came to me and was advised to perfect arrangements at once, which was done; and at daylight Tuesday morning the town was so closely guarded that no one could enter or leave without permission of the State Board of Health. Next day, I had a telegram from Surgeon Murray, Marine Hospital Service, asking for a pass to enter, which was immediately granted and he arrived at about 5:30 p. m. Wednesday the 8th inst. The vigorous nature of this quarantine is shown by Dr. Murray's telegram the same afternoon to the Supervising Surgeon General Wyman, at Washington.

"Arrived at 5 o'clock this evening, tried to get through on an engine, but could not get permission from Mississippi State Board of Health until 10:30 a. m. Dr. Gant of the State Board of Health, in charge. There is a state cordon about the town of 25 posts, which the State proposes to sustain for the present, or until danger decreases. There are here perhaps 50 persons who will accept the camp. Will try to make a census tomorrow as was done at Brunswick, and without which there can be no clear action. Lime, sulphur, bichloride, alcohol, and ovens ordered, with which to begin disinfection."

The disinfectants mentioned in the above telegram are those ordered by the State Board but Dr. Murray refused to give credit in his telegram to Wyman to the State authorities. It will be seen from the above that the town was effectively cordoned by the State Board of Health and the infection surrounded before the arrival of a representative of the Marine Service on the ground. On Wednesday morning, 8th of September, Dr. Guiteras arrived, and in company with Dr. Bailey and myself, examined 25 cases of the fever, and reported Surgeon General Wyman that he withheld his opinion as to three cases, the others he called dengue. Wednesday night, Dr. S. R. Dunn, of the State Board of Health, Surgeon Carter, and Pass. Ass't. Surgeon Wasdin arrived. Thursday morning, the 9th of September, an autopsy was held on the body of Mr. Seymour, who died the previous night, and the unanimous decision reached that he had died of yellow fever. There were presnt at this autopsy: Doctors Carter, Murray, Guiteras, Wasdin, Bailey, Shannon, Dunn, Gaines, and myself. While at this autopsy a message was received from Dr. Haralson, Biloxi, asking me to come there to see cases he and Dr. Tackett and Dr. Tebo had pronounced yellow fever in the Bosarge family. Upon invitation Surgeon Murray and Carter accompanied me and we all, after examination of the cases, concurred in the decision arrived at by the attending physicians. Returning to Ocean Springs, I accompanied Surgeons Murray, Dunn and Carter to Fontainbleau to select a site for a detention camp. Friday was spent with Dr. Dunn in looking after fumigation, disinfection and general sanitation. On Saturday, September 11, I had a message from Dr. Haralson asking me to leave Dr. Dunn in charge of Ocean Springs and come to Biloxi to work in connection with him. Since Biloxi is a larger town than Ocean Springs, and there were no immune physicians representing the State there, I decided to act upon Dr. Haralson's request, accordingly leaving Dr. Dunn in charge. I arrived in Biloxi order out of the conflicting regulations of the towns, counties, and states. In this he had many trials, and many obstacles to overcome, for the people were very unreasonable, and often times doctors disagreed with the health officers, and caused much opposition to the enforcement of regulations promulgated by them.

Dr. Guiteras was called a few days later, September 14th, to Edwards, Mississippi, and from that place wired as follows:
"Wyman, Wash.

"The diagnosis of yellow fever made in six cases by Dr. Purnell is confirmed. He has two other cases that I have not yet seen. There are many children sick with what is probably a mild type of the disease. The cases are not confined to any one locality, but are all traceable to the Anderson case which came from Ocean Springs. The medium of distribution appears to have been the Champion case. Mr. Champion, who died, was a prominent man and many people congregated in the house during the illness. Dr. Purnell is immune and I recommend him as competent to take charge of the situation if necessary. I shall leave this evening at ten for Mobile, unless otherwise directed.

GUITERAS."

The fever also occurred at Clinton, Cayuga, Raymond, and Nitta Yuma. Dr. J. H. Purnell handled the situation admirably at Edwards, and neighborhood, and reported more than 700 cases with 27 deaths at Edwards and in that vicinity.

He was ably assisted when the stress and strain became too much for him to bear by Dr. Dunn, who was the only member of the State Board of Health besides myself who had had yellow fever. Drs. Waldauer, Birchett, Dabney, local physicians, did splendid work.

It is a rather interesting episode, of which Dr. Dunn was very fond of telling how he was shut up in a box car on passing through Vicksburg to Edwards, or one of the other above-mentioned towns. He was a very large and weighty man, in the neighborhood of three hundred pounds, and the heat was terribly oppressive. He said that he almost smothered. He had very many rough experiences which he delighted to tell about. He was a good story teller, and fond of talking—and he was also a good physician, and knew yellow fever when he saw it. In his report of the fever at Ocean Springs, he had this to say, "You might as well expect to grow a peach tree by planting an acorn, as to expect to set out dengue and produce black vomit in yellow fever. The only mistake, I think, my friend, Dr. Guiteras, made was finding any dengue." In regard to this epidemic, I recall that I made the statement a number of times that, in my opinion, malaria, yellow fever, and dengue were very closely allied, or akin, and probably due to the same cause. And now since it is established that dengue is caused by another species of the stegomyia fasciata, it should be easy to establish the relationship between the three diseases. And if that is ever done, I believe it will be found that dengue is really a mild type of yellow fever. And the word dengue may be eliminated from medical nosology. Yellow fever may possibly come to be called by some other less alarming name as was attempted by Dr. Souchon, President of the Louisiana Board of Health, and others in New Orleans, when they tried to make the people believe that the disease there and then prevailing, was not true yellow fever, but should be called "Icteroid" or "Yellowoid."

It seems to me that all epidemic infectious diseases are of a milder type than fifty years ago. I remember the description of the terrible outbreaks of scarlet fever, diphtheria, and smallpox, described in the literature and text books of my early professional days, and have been impressed by the fact that so far as my experience goes, such diseases have been of much less severity. I have seen smallpox so mild that many patients, especially among negroes and children, did not go to bed, and many times were seen on the streets of the towns, with papules characteristic of smallpox and yet they were not at all sick. Further I have seen adult negroes working on the railroads with the eruption on them. The disease in these cases was either not recognized by the physicians, or denied. It was called by various names, Cuban itch or impetigo, and it was almost impossible for the health officers to enforce vaccination.

I, myself, remember treating seventeen cases of what I called follicular tonsilitis, but which proved to be diphtheria, without a single death. This was before the days of antitoxin.

In my early days of practice, malaria of the congestive type in Mississippi killed many people. Now-a-days malaria is controlled by screening and elimination of mosquito-breeding places by drainage, or I should say prevented, but such cases as occur are of very much milder type, and deaths are not so frequent even among children.

So, I am persuaded that all epidemic diseases of which I have any knowledge are of milder type, due either to the acquirement of a certain degree of immunity, or to improved sanitary conditions.

I remember hearing Dr. Murray remark that yellow fever is the kindest of diseases that kill because it leaves no sequellae. I think I can add that the epidemic of Ocean Springs of 1897 was also one of the mildest of diseases that kill. Compared to 1878, it was about like measles compared to smallpox. I learned much from the epidemic, which was of great benefit to me in making a diagnosis of the disease the following year. I found it would not do to eliminate yellow fever if all the classical symptoms were not found in special cases. No matter, however, how mild a case may be, according to my recollection, and experience, albumen is present on the third day of fever in all cases. Sometimes, especially in children, only a trace, but unmistakably albumen as determined by Heller's cold nitric acid test. The mildness of this epidemic did also teach the people a very important lesson, and that is, that yellow fever of that type is really not so much to be dreaded and that there is no real cause for all the inordinate fright and panic, as shown that year by the people of the interior and the northern part of the State.

Dr. J. F. Hunter, of Jackson, Dr. W. G. Kiger, Brunswick, and Dr. H. H. Haralson constituted the executive committee of the State Board of Health at that time. Dr. Haralson, after being appointed inspector on the coast, resigned and Dr. H. S. Gully succeeded him as a member of the executive committee. Dr. Hunter was also secretary of the State Board of Health, and executive officer. and upon him fell the major part of the duties, work and responsibility of the Board during three most trying years, and he performed his part splendidly. He was a good, active, intelligent doctor. He was not immune, but when the excitement occurred on the coast, in regard to the fever at Ocean Springs, he ran down to Biloxi, to confer with Dr. Haralson, and on his return was not permitted to come in to his own home town, Jackson. He was forced to make his headquarters at Vicksburg for a week or more. I mention this to show the unreasonableness of the people. Dr. Carter had a like experience when he was not permitted to enter a small town in Texas, although he was representing the United States Government. An epidemic of yellow fever is, for the time it lasts, as demoralizing and cruel as war. People lose their heads, first, through fear and later those who remain during the epidemic grow accustomed to death, and to a certain extent lose their moral sense, and do many things they would never have done under normal conditions.

Anesthesia

The selection of an anesthetic suitable to the individual patient with his individual disease is of the greatest importance in the practice of medicine. Anesthesia is comparatively young. It has been less than a hundred years since ether and chloroform were used as anesthetics. Vocal anesthesia is the oldest known. It was used on Adam perhaps. It reached its zenith in the New England States in Colonial days when it became necessary to station deacons in different parts of the church house with a rabbit's foot on a fishing cane to tickle the noses of the most deeply anesthetized, and more especially the ones with respiratory static. The lullaby of the black mammy in the days of slavery was the anesthetic of choice for the infant. A kind word of interest would be a great help now along with the anesthetic of today. It is not that many people die under anesthesia today, but it is because the average person dreads it more than the operation, and may delay surgery on account of this dread. Some have a dread of being put to sleep, some fear being operated upon while awake. The anesthetic should not be counted of minor importance as is being done. The average general surgeon in the country can not learn how to administer all the anesthetics we have now. He would do well to select three or four that will best serve his purpose and to see that they are properly used. For every operation the stage should be set as for a play on Broadway and the patient should be made the hero. Novocaine by the infiltration method, gas-oxygen, ether and chloroform, one or the other can be used in almost every case that the surgeon in the small hospital has. Others might serve a better purpose for some surgeons. It takes a good hostess, an artist, a psycologist, a practical mechanic and above all a man with a sympathetic heart to give an anesthetic as it should be administered. You had better put off some operations in a child for a year than to use the hold and tie and drown method that you see in the average hospital. A comfortable temperature in the operating room and while the patient is waking up is a good preventive measure in post-operative treatment. The anethetized patient should be handled carefully. Cold towels to the face and cold cream massage is nice for the ether patient when put to bed after operation. The anesthetic is important to the patient, it should be to the anesthetist and to the surgeon.

Imagine a baby in natural sleep, slip up and give it chloroform or ether without waking it up and you will have the idea of how gentle and kind you should be in administering an anesthetic. Blowing and counting were out of date before they started, should have been.

THE MISSISSIPPI DOCTOR

The Journal with a vision, the delivery of modern medicine to the masses at less cost to the individual and more profit to the practitioner. The champion the small hospital, the hub around which this service must be built.

W. H. ANDERSON, M.D., *Editor and Mgr.*
MILDRED P. ANDERSON, *Assistant Editor*

Official Organ of
Mississippi State Medical Association
Mid-South Postgraduate Medical Assembly
Owned by
Northeast Mississippi 13 County Medical Society

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Entered as second-class matter, January 19, 1926 at the post-office at Booneville, Miss., under the Act of March 3, 1870.

Dr. Felix J. Underwood, executive secretary of the state board of health, with other members of his staff Drs. H. C. Ricks, George W. Mast, Ray Biggs, R. L. Gray together with Drs. Charles Armstrong of the United States Public Health Department and W. A. Evans of world note for his writings and his work in public health, visited Northeast Mississippi recently in the interest of the infantile paralysis situation. Dr. Evans discussed the "missed cases," giving early symptoms, etc. Dr. Armstrong discussed the preventive measure recommending the picric acid-alum spray. Dr. Ricks outlined the cooperative quarantine measures. Doctor Evans very kindly consented to discuss poliomyelitis briefly in this issue of the journal. You will read what he says with much interest and with profit. He laid down his work willing to help in this emergency, which is characteristic of the big man that he is. Drs. Underwood and Ricks are on the job in fine style. Dr. Mast is located at Iuka to advise with the doctors on any cases they may have in the northeast corner of the state. We expect to have a number of papers in the next issue of the journal on this subject.

One of the best features of the Mississippi Medical Association held in Greenville, May, 1936, was the exhibit of Pathological Specimens by Dr. E. T. White of Greenville. Much careful scientific work went into the preparation of the exhibit and was a valuable contribution to the meeting. It was the first time a scientific exhibit was given at any of our state meetings and the doctors of Mississippi should be encouraged to do more work of this nature.

The specimens presented consisted of thin cross sections showing the important pathologic lesions. They were prepared in Kaiserling's solution and mounted between glass plates with edges sealed with asphalt. This makes a museum cell that shows the specimen better than the ordinary museum jar, takes less space, is easy to handle, the color is well preserved, the specimen keeps indefinitely, and the cost is much less than ordinary museum jars.

The specimens presented in the exhibit were surgical pathology specimens from the King's Daughters Hospital, Greenville. They consisted of inflammatory lesions, and benign and malignant tumors.

Among the malignant growths were specimens of carcinoma of the breast, ovary, and intestine, sarcoma of testicle and ovary, lymphosarcoma of the cecum and lymph glands, hypernephroma of kidney, malanosarcoma and carcinoma of the prostate gland with metastic growths in the liver. An unusual malignant growth was a large embryonic adenosarcoma or Wilm's tumor of the kidney from a child four years old.

Among the non malignant growths were a neuno fibroma from the thigh, adenomas of the thyroid and a large adenoma of the parathyroid gland. This tumor is a very rare growth and many doctors never see a case of parathyroid adenoma in a lifetime.

Another group of interesting specimens were a series of spleens from Banti's disease, aplastic anemia, erythroblastic anemia (Cooley's anemia) and purpura hemorrhagica.

Other specimens in the exhibit were gall bladders showing chronic inflammatory reactions with cholelythiasis, dermoid cysts and a tube with ectopic pregnancy.

On the 14th of April, 1908 this writer visited, for the first time, the wonderfully charming old city of Natchez. I should like to recall and mention the impressions that were registered at the time of this visit. But I will only say that I have never visited a town or city that impressed upon me more forcibly its romantic and historic charm than did Natchez. It is not a matter of wonder to me that so many people are now making annual trips to this mecca of lovers of beauty, romance and history. But the strongest drawing card for me is the fact that I have some dear friends who live there (it is possible that Dr. "Ims" of Vicksburg might say it is because the bones of a certain brilliant lawyer of the long ago, lie buried there). But why is it that I mention Natchez in this editorial attempt? It is because of the fact that I was drawn there at that time by the forty-first annual meeting of the Mississippi State Medical Association. There were many things that made that meeting notable. The presiding officer of that session was Doctor R. S. Curry. His address was short but in it he made some suggestions that were wise and I feel that they have borne much fruit. I regret that Dr. Curry has seen fit to withdraw fellowship from us. I do not think he has engaged in practice for a considerable number of years. The program was a good one, but as on the year previous, most of the numbers were contributed by out of state essayists. A rather unfortunate remark was made on the floor of the house of delegates. It was that the name of the Association be changed to "The Memphis and New Orleans Medical Debating Society." This remark was offensive to some of our friends, especially, I think, to my good and revered friend, Dr. Frank Jones. I have always felt that he was, to some extent, alienated from us by this unthinking remark. Be that as it may, we all love to honor the memory of this man of brilliance and integrity. The outstanding pronouncement of that meeting, I think, was the address of Dr. McCormack who was the secretary of the Kentucky State Board of Health. He was also a traveling representative of the A. M. A. This address was the ablest of its kind to which I have ever listened. I feel quite certain that the growing sentiment in favor of a worth while public health program was greatly stimulated by this address. Possibly much of what has been accomplished in this line in Mississippi is due to the effect of this address. It, also, stirred up and strengthened the spirit of organization and cohesiveness in the profession throughout the state. It would pay well to hunt up the transactions of that meeting and re-read that address.

In the July issue of The Mississippi Doctor there appears a synopsis of a lecture that was delivered before the Mid-South Postgraduate Medical Assembly in February by Dr. Alvarez, of the Mayo Clinic. This lecture, in my thinking, was one of the best and most practical that has been delivered before this wonderful association of medical men. It should be read and re-read by every reader of the journal. It is worth much more than membership in our association costs. And it is only one of many such splendid papers that have appeared and will continue to appear in the journal.

It is to be regretted that an outbreak of infantile paralysis is threatening the northern part of our state, but if the warning of our Board of Health is heeded, there probably will be no wide spread of this serious disease. It is fortunate that we have an organization in this state that is so dependable and efffcient as our Board of Health. The prevention of sickness is easier and much more effective than our puny efforts at curing it. When the public shall come to realize prevention of disease is possible and that cure is only problematical, more appreciation of the efforts that are being made in that direction will be manifested, and more financial support will be given those engaged in this great work. Again I feel that when the doctors of the state shall give more thought to the public interests and less to gathering in a few shekels from the unfortunate sick, we shall be more appreciated than we now are, and shall have more self respect as well. Let us not forget that we are, indeed, our brothers' keepers and let us do our duty tho the heavens fall.

G. S. B.

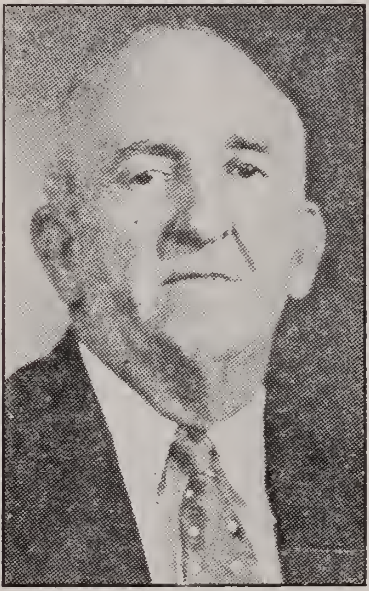
Postgraduate Course To Be Held At Booneville

DR. ROBERT A. STRONG

Mr. Q. Edward Gatlin from the State Board of Health was in town today in conference with the local medical society of this county relative to a postgraduate course to be given here in the near future on pediatrics by Dr. Robert A. Strong of the Tulane faculty. This will begin August 17 and last one week, two hours each day. Doctors from five counties will meet here, Alcorn, Tishomingo, Itawamba, Lee and Prentiss. The meetings are to be held in the dining hall at the hospital. Dr. R. B.

Caldwell was appointed as chairman of a committee to invite the doctors of adjoining counties. Drs. McDougal, Pharr, and W. H. Sutherland, as a local committee on arrangements.

Who's Who In Mississippi Medicine



DR. R. J. BROWN

Here is a likeness of Doctor R. J. Brown, of Iuka, Miss. He was born in Tishomingo County on October 20, 1877. He taught in the public schools of Mississippi for a number of years. Later he served as a mail clerk on the Southern Railway. He graduated from the Memphis Hospital Medical College in 1907, where upon he located in Iuka, and has practised his chosen profession there ever since. He served several terms as county health officer and for the last twenty years has been local surgeon for the Southern Railway. During the World War he was local examiner for the draft board. After the war he was retained as U. S. public health examiner of Tishomingo County. He is a safe and a sound practitioner. He is well informed and he takes a deep personal interest in his patients. He not only guards their health, but he helps them in every way possible in every walk of life.

He is always devoted to his practice, but he is also a lover of sports. He takes some time out for this. It keeps him in better trim for his practice he thinks. No man enjoys bird hunting more than Doctor Brown. He is an expert marksman. In trap shooting he has won marked distinction; just recently he won the Mississippi State singles championship in trapshooting. He won the Tri-States championship, class D. Memphis in 1933; Southern zone championship, class C. Atlanta in 1934. He will attend the national trapshoots at Vandalia, Ohio, at an early date and he hopes to win the national championship.

It is good to know Doctor Brown. He is a square dealer. He is a loyal friend that you always enjoy. The Doctors of Mississippi and the Mid-South will follow him to the national contest with much interest and a sincere hope that he may capture the prize.

Book Review

Williams OBSTETRICS, by Henricus J. Stander, is just off the press in its seventh edition. And a more complete book on obstetrics is scarsely available. It is a revision and enlargement of the text originally written by J. Whitridge Williams. who, in his own preface, set forth "the scientific basis for and the practical application of the obstetrical art" as employed by him in his deparment at the Johns Hopkins Hospital. Dr. Stander retained all of the original that is consistent with the new developments in obstetrics, and added three chapters, one dealing with the hormones as related to pregnancy and the puerperium, one on the urinary complications, particularly pyelitis, and the third on anesthesia and analgesia.

The contents of the book are voluminous, but so well correlated and so concisely written and illustrated they might be a most valuable text-book for the general practitioner. No exepense is spared in illustrating every subject and every phase of technic, accuracy and practical teaching qualities being wonderfully accomplished. The first section undertakes a detailed presentation of the anatomy; the second takes up the physiology and development of the ovum; the third the physiology of pregnancy; the fourth, the physiology of labor; the fifth, obstetric surgery, including procedures which do not aim at delivery; the sixth, pathology of pregnancy, with complications, toxemias, diseases and abnormalities fully considered; the seventh, pathology of labor, with extensive treatment of dystocias, pelvic anomalies, hemorrhage, injuries, etc.; and the eighth section deals with puerperal infection and diseases and abnormalities of the puerperium.

This book is reasonably priced at $10.00, and is published by D. Appleton-Century Company, New York.

ALONG THE MEDICAL HIGHWAY

Dr. Vance Murry, of Ripley, is now associated with the Gamble Brothers & Montogemry at Greenville. He is the son of Dr. Chas. Murry, the grandson of the late Dr. John Y. Murry, and the nephew of the late Dr. Will Murry, a family of doctors who have been favorably known in Mississippi for many years. He is an unusually fine young man and well trained for his work. He will be in charge of the Department of Dermatology.

W. R. Bethea, M.D. and H. D. Gray, M.D., announce their association for the practice of Radiology, 1024 Madison Avenue, Phone 7-2121, Memphis, Tennessee.

Dr. Shields Abernathy announces the association of Dr. Howard H. Ashbury, formerly of Memorial Hospital, New York City, in the practice of Oncology. Dr. Ashbury will conduct the X-ray department of the Surgical & Radiological Clinic. Referred diagnostic and therapeutic radiology invited.

Dr. W. H. Anderson
Editor, The Mississippi Doctor
Booneville, Mississippi

Dear Doctor Anderson:

We have just completed, in Hattiesburg, a series of lectures and clinics held by Dr. Maxwell E. Lapham, of Philadelphia, under the auspices of the State Board of Health, The Mississippi State Medical Association and the Commonwealth Foundation. This was given for the benefit of the doctors of Forrest, Lamar and Perry Counties. The attendance was very good throughout the ten weeks. The lectures were very instructive and every doctor who attended expressed himself as having been benefited by so doing. Dr. Lapham is a very likable and congenial person. His contacts out of the meetings were very beneficial to those of us who sought his aid and council for our various private problems. I feel that this is a great work indeed and that congratulations should be offered to the proper authorities for bringing to our very door such an excellent opportunity as we have just had. I thought perhaps that you as editor of our state magazine would be interested to know how we felt concerning this matter.

With kindest personal regards, I am,

Yours very truly,

J. P. ÇULPEPPER, JR.,
Pres. So. Miss. Med. Society

Dr. W. H. Anderson, Editor,
The Mississippi Doctor,
Booneville, Miss.

My dear Doctor Anderson:

I am enclosing a bit of Medical News from Mississippi, which I felt that you would like to run in your Journal. This pertains to a course of postgradute lectures in pediatrics for the physicians of Mississippi, to be given by Dr. Robert A. Strong, Professor of Pediatrics, Tulane University and which began on Monday, July 6, 1936, at Clarksdale, Miss. This course consists of five lectures a week.

1. Newborn.
2. Nutritional Requirements in Infancy.
3. Nutritional Diseases in Infancy and Childhood.
4. Immunizations
5. The Most Frequent Causes of Vomiting in Infancy.

These lectures are to be aided by motion pictures and lantern slides. Doctor Strong will go from Clarksdale to Natchez, Miss., and then to other parts in Mississippi. for ten consecutive weeks.

This course of lectures is sponsored by the Mississippi State Medical Association, the Mississippi State Board of Health, Tulane University Graduate School of Medicine, Tulane University School of Medicine, and the Mississippi State Hospital Association. The Mississippi State Pediatric Society at a recent called meeting, approved these lectures and are heartily cooperating with the sponsors of the same.

The following committee on postgraduate medical education is in charge of the activities of the course: Dr. Harvey F. Garrison, President, Mississippi State Medical Association; Dr. J. W. Lipscomb, President, Mississippi State Board of Health; Dr. Felix J. Underwood, Mississippi State Health Officer; Dr. H. W. Kostmayer, Dean, Tulane University Graduate School of Medicine; Dr. C. C. Bass, Dean, Tulane University School of Medicine; Dr. Leon S. Lippincott, Secretary Mississippi State Hospital Association, and Dr. W. H. Anderson, Editor, The Mississippi Doctor, the offical organ of the Mississippi State Medical Association.

At the meetng of the Mississippi State Pediatric Society, which was held in Jackson, Mississippi at the Robert E. Lee Hotel, on July 2, 1936, at 7 o'clock, p. m., and the following officers were elected for 1936-37:

Dr. Harvey F. Garrison, Jackson, President; Dr. John Bullock, Jackson, Vice-President; Dr.

Guy Jarratt, Vicksburg, re-elected Secretary-Treasurer.

I felt that you would like to have this medical news for your Journal.

I am,

Sincerely yours,
HARVEY F. GARRISON.

TO THE PHYSICIANS OF MISSISSIPPI

The meeting of the Southern Medical Association at Baltimore, Maryland, November 17-20, 1936, promises to be one of the most outstanding medical meetings of this year.

The Southern Medical Association is really "our own." It is composed of the leading physicians of the south. The programs of the Southern Medical Association are the most outstanding of any Association in the United States. These programs are made up with subjects of peculiar interest to the physicians of the southern states. Men appearing on these programs are the most outstanding leaders in the profession of the south, therefore, the papers and discussions are of particular interest to southern physicians.

Allow me to urge upon you the great importance of holding membership in the Southern Medical Association. Our loyalty alone, to the association of our Southland should be sufficient to demand that each one of us should obtain and keep up our membership in the Southern Medical. The dues are only four dollars per year, and this entitles us to the Journal, which, alone, is worth many times the price of membership.

If you are not already a member, send your check for four dollars to the secretary of the Southern Medical Association, Birmingham, Ala., giving him the name of your local medical society and state that you are a member in good standing of same, and your State medical association. He will receipt your four dollars and enroll you as a member and you will begin receiving the Journal promptly.

The "Lord Baltimore Hotel" is the headquarters for the association. If possible, you should, by all means, attend this meeting, as Baltimore is one of the medical centers of the United States, and this will undoubtedly be one of the greatest medical meetings that this country has ever known. If you have not already done so, you should write immediately for your reservation.

Sincerely yours,
HARVEY, F. GARRISON,
Councilor from Mississippi,
Southern Medical Association

Dr. J. W. E. reports a case showing both typhoid bacilli on blood culture and malaria parasites in a stained smear proving the occasional accuracy of the illogical term typhoid-malaria.

SOUTH MISSISSIPPI PHYSICIANS ADOPT RESOLUTIONS THANKING DR. ROBERT STRONG FOR POSTGRADUATE LECTURES

WHEREAS, the Mississippi State Board of Health, the Mississippi Medical Association, and Tulane University have made it possible for a series of postgraduate lectures in pediatrics in South Mississippi and

WHEREAS, the doctors of Jones and surrounding counties had the privilege of hearing Dr. Strong for two hours each night beginning July 20 and ending July 24, and

WHEREAS, we believe that Dr. Strong's lectures on pediatrics are of the highest type and extremely helpful to all physicians who treat children, therefore,

BE IT RESOLVED, that we extend our sincere thanks to the Mississippi Medical Association, the Mississippi State Board of Health, and Tulane University for initiating this form of post-graduate work in Mississippi and express to them that it is our belief that the type of postgraduate work which has been given in obstetrics and pediatrics is one of the best programs that has ever been started in Mississippi, because it brings postgraduate work close to the physicians, and they are able to carry on their work, and at the same time, spend two hours a day in study, improving their knowledge so as to give their patients better service. The cost of same is almost nil so far as the physicians are concerned, therefore,

BE IT RESOLVED FURTHER, that a list of all the physicians attending the lectures, also, student and graduate nurses who attended, be sent to the Mississippi State Board of Health, Mississippi Medical Association, Tulane University, Dr. Strong, and the Mississippi Doctor and the lay press.

The above resolution was unanimously adopted at the last meeting held by Dr. Strong on Friday night in Laurel, Mississippi.

The following physicians and nurses attended the lectures: Drs. Woodfern, Waynesboro (2); Stroud, Mt. Olive (4); Newcomb, Richton (2); Cullpepper, Hattiesburg (2); Temple, Hattiesburg (4); McKinnon, Hattiesburg (4); Blackweilder, Hattiesburg (4); Clark Hattiesburg (2); Cargile, Taylorsville (5); Carr Moselle (5); Barkeley, State Line (5); Gray, Waynesboro (5); Calhoun, Mt. Olive (4); Corsey, Raleigh (5); Moseley, Hattiesburg (4); Dubose, Purvis (5); Hand, Shubuta (1); Garrison, Jackson (1); Davis, Waynesboro (1); Bullock, Jackson (1); Wammack, Jackson (1); Verner, Jackson (1); Boykin, Mize (4); Bough, Mize (4); Blount, Collins (2).

The following attended from Laurel: Drs. J. C. Butler (1); Oates (2); Golden (2); Bush (5); Waldrup (3); Davis (5); Armstrong (4);

Jarvis (3); Kittrell (1); and Green (5); Carter, Ellisville (4); Smith, Laurel Rt 1.

There were from eight to thirteen Graduate Nurses in attendance each night and from fourteen to twenty student nurses.

Dr. Robert A. Strong, Prof. Pediatrics in Tulane University, was at his best and all in attendance expressed their appreciation for his splendid lectures.

JOE GREEN.

A fine report Doctor Joe. We expected it though from Laurel and surrounding territory.—Ed.

Dr. J. R. H. delivered a woman in the pustular stage of smallpox; the six months stillborn fetus also showing the pustular lesions—the mother recovered. This case proving the transmission of the exanthematous disease in utero was observed in Mississippi. It is cited not because of its rarity, but to stimulate interest in clinical research—for most doctors of wide experience have had this event occur in their practice. It demonstrates that text-book laws are proven in our own communities each day. We perhaps have the advantage of our colleagues in the metropolitan cities in unraveling many of the unsolved problems in medicine. The drama of cancer is being unfolded before us each day. The prodromal symptoms as well as end stages are presented to us while the institutional man only sees the scene enacted during the period of hospitalization.

Dr. J. H. L., who limits his practice to dermatology, received a patient referred for x-ray epilation as treatment for ringworm of the scalp. The correct diagnosis was pediculosis capitis! Proper therapy yielded a rapid recovery.

Dr. R. E. H.'s white male patient had been advised to have his carcinoma of the tongue excised by several prominent surgeons. Seventy-five dollars worth of radium treatment failed to produce any healing. After the Wassermann test showed a positive reaction, the ulcerated gumma healed rapidly under accepted antiluetic therapy.

"Into this Universe, and Why not knowing
Nor Whence, like Water willy-nilly flowing;
And out of it, as Wind along the Waste,
I know not Whither, willy-nilly, blowing."
Said the agnostic Omar.

Khayyam as he dreamed out the Rubaiyt; while Dr. J. R. H. left the one room home, where he witnessed life exchanged for death, with a stronger, more profound belief in the Supreme Being. A small boy died of intestinal obstruction at the same instance a new brother was born.

Dr. R. E. H. challenges his medical acquaintances to show a more rapid succession of pregnancies (with apparent term babies) than his patient who bore one child on Christmas night, December 25 and another the following October 5.

Truth is the key to the psychology of satisfactorily handling the child patient. A four year old child can be encouraged to endure short painful procedures without crying from pain if the following rules are tactfully practiced: (1) Have the parents and relatives leave the room. (2) Do not fool the patient, give warning so that he may expect and prepare for pain. (3) Often such a trade as the reward of an ice cream cone if he does not cry helps wonderfully.

Without anaesthesia the writer has been successful in suturing a number of lacerated wounds in small children without having them cry. The longest procedure was a laceration in a boy, age 4, that required seven stitches—meaning, to his sensorium, a severely burning cleansing solution and fourteen painful sticks with a needle.

The first step is to excuse the parents and relatives from the room. This removes sympathy and puts the patient on his own stamina. This requires tact and is often difficult. If the parents stay in the results are a squalling, wriggling, squirming party that gives the doctor the jitters and makes him wish ten times over that he had administered a general anesthetic. Parents will leave more quickly if the child's consent is obtained. He will usually answer yes to the query, "Would you like to let mother and father go into the waiting room, and just you and I fix this cut?" Then while preparing the hands and laying out the instruments enlist his confidence by explaining what you expect to do. Explain that by sewing the wound only a narrow scar will be left as against an ugly one if left without repair. Go slowly and do not frighten him by rapid jerky movements and the blood curdling rattle of carelessly throwing instruments together. Show the needle, the suture material. and enlist his intrest in the technic. Often he will enter into conversation and inquire as to the next step. Expain that the needle is a nice sharp one and will not hurt nearly so badly as a dull one. Let him see you clamp the needle in the holder. Now inform him that he will be warned before being stuck each time so that he may "grit his teeth" and bear the pain. Appeal to the patient's courage by telling about little Jimmy Jones having a longer wound sewed just the other day without crying at all. Challenge him with a confident, "Surely you can stand more pain than he." Now proceed as soon as a small reward for not crying such as an ice cream cone is set up. Presently a well satisfied patient will be lifted from the table. The parents with amazement at seeing the sutures actually in the flesh. Do not fail to provide the nickel for the ice cream cone—best of all, go with him to get it. The thrill of having built a stronger character, the thrill of having made a true friend, not to mention the satisfaction of seeing this patient return when further medical attention is required, will be ample reward for the pains taken and the time spent.

S. A. H.

The Second annual meeting of the Mississippi Valley Medical Society will be held at Burlington, Iowa, Sept. 30, Oct. 1-2. The entire meeting, including the technical and scientific exhibits, will be held on the mezzanine floor of the modern, 300 room Hotel Burlington. There will be morning, afternoon and evening sessions and the complete program has been especially arranged to appeal to the general practitioner.

Among the eminent clinicians who will address the meeting are:

Donald C. Balfour, M.D., LL.D., F.A.C.S., Rochester, Prof. of Surgery, U. of Min. Graduate S. of M.; Chief Surg., Mayo Clinic.

Arthur Jos. Barsky, D.D.S., M.D., New York City, Adj. Prof. of Plastic Surgery, New York Polyclinic M. S. and Hospital.

George Crile, M. D., LL.D., F.A.C.S., Cleveland, Director Cleveland Clinic Foundation.

Frederick H. Falls, M.S., M.D., F.A.C.S., Chicago, Prof. & Head of Dept. Obstetrics & Gynecology, U. of Ill. College of Med.

Melvin S. Henderson, M.D., F.A.C.S., Rochester, Prof. of Orthopedic Surgery, Univ. of Minn. Graduate School of Medicine.

Richard H. Jaffe, M.S., M.D., Chicago, Prof. Pathology, Univ. of Chicago & Univ. of Ill. College of Medicine

Ralph A. Kinsella, A.M., M.D., F.A.C.P., St. Louis, Prof. & Head of Dept. Medicine, St. Louis University School of Medicine.

Raymond W. McNealy, M.D., F.A.C.S., Chicago, Assoc. Prof. of Surgery, Northwestern University Medical School.

Bela Schick, M.D., New York City, Formerly Prof. of Pediatrics, Univ. of Vienna.

Arthur Steindler, M.D., F.A.C.S., Iowa City, Prof. & Head of Dept. Orthopedic Surgery, State Univ. of Iowa, Col. of M.

These men will each give two practical lectures or clinical demonstrations and will be assisted by thirty-three specialists from Illinois, Missouri and Lowa who will conduct a clinical lecture course.

At the annual Banquet on Thursday evening, October 1, the following will address the meeting: Dr. Rolland L. Green, Peoria, President of the Illinois Medical Society; Dr. Ross A. Woolsey, St. Louis, President of the Missouri State Medical Ass'n.; Dr. Prince E. Sawyer, Sioux City, President, Iowa State Medical Society; Rev. Alphonse M. Schwitalla, St. Louis, Dean of St. Louis University School of Medicine and Dr. Bela Schick, of New York City, Discoverer of the "Schick Test."

There will be over sixty lectures, demonstrations, etc., for the full three day session. All ethical physicians are cordially invited to attend. A detailed program may be obtained from Harold Swanberg, M.D., Secretary-Treasurer, 211-224 W. C. U. Building, Quincy, Illinois.

The American Medical Association through its biographical department has now completed the 14th edition of the American Medical Directory. This is a fine piece of work. It is very valuable. The man in the profession who is keeping up with organized medicine and the work in organized hospitals can ill afford to be without it. It gives data regarding the by-laws of the American Medical Association, history of medical schools, list of hospitals approved for training interns, etc. It gives a list of the doctors by states and the hospitals and other information valuable to the profession. The price for this amount of organized information is very small, only fifteen dollars. If you are interested write the American Medical Association, Chicago.

Antivenin

Concurrent with the reports of more than 600 persons being bitten by the "Black Widow Spider" with a mortality record of 30, comes the announcement that E. R. Squibb & Sons are now supplying Antivenin (Anti-Black Widow Spider Serum.) Widespread professional interest has been shown in methods of treating these bites, especially with the steady increase in the number of cases reported from southern, southwestern and western sections of the United States.

Antivenin is prepared by the hyperimmunization of sheep with repeated doses of venom from the black widow spider. The serum is standardized by determining its neutralizing effect when mixtures of it with venom are injected into young rats. Clinical reports upon this important product as well as information as to dosage and administration are contained in literature supplied by E. R. Squibb & Sons upon request.

Antivenin is available in ampoules of sufficient content to permit the withdrawal and administration of 10 cc. of the serum.

Announcing

Five extension postgraduate lectures in Pediatrics in South Mississippi Charity Hospital at Laurel. Five postgraduate lectures in one week, beginning Monday, July 20, 1936, at 7:30 p. m. o'clock, by Dr. Robert A. Strong, Professor of Pediatrics, Tulane University School of Medicine New Orleans.

OUTLINE OF THE LECTURES

Each meeting will be approximately two hours in length, the first hour for lectures by Dr. Strong, and the second for round-table discussions, motion pictures and slides. Meetings will be held every day, Monday through Friday, for one week. Subjects are:

1. **The Newborn**
   - (a) Physical Examination (Motion Pictures)
   - (b) Care of the normal newborn
   - (c) Diseases of the newborn
2. **The Nutritional Requirements in Infancy**
   - (a) Physiology of digestion
   - (b) Vitamins
   - (c) Breast feeding
   - (d) Artificial feeding
   - (e) Artificial diet materials (Motion Pictures)
   - (f) Stools in infancy
3. **Nutritional Diseases of Infancy and Childhood**
   - (a) Rickets
   - (b) Scurvy
   - (c) Pellagra
   - (d) Infantile atrophy
   - (e) Diarrheas of early life
4. **The Immunizations**
   - (a) Diphtheria
     1. Age
     2. Toxin-antitoxin
     3. Anatoxin (toxoid)
     4. Alum-precipitated toxoid
     5. Schick test
   - (b) Scarlet fever
   - (c) Typhoid fever
   - (d) Pertussis
     1. Sauer vaccine
     2. Krueger's pertussis U. B. A.
   - (e) Smallpox
     1. Multiple puncture
     2. Intradermal
   - (f) Acute Anterior Poliomyelitis
     1. Kolmer vaccine
     2. Park and Brodie vaccine
   - (g) Measles
     1. Convalescent serum
     2. Whole blood
   - (h) Tetanus
5. **Most Frequent Causes of Vomiting in Infancy (Motion Pictures and Slides)**
   - (a) Over-distension of stomach by swallowed air
   - (b) Too frequent feeding
   - (c) Too large volumes of food
   - (d) Unsuitable composition of food
   - (e) Parental infection
   - (f) Habit or "nervous" vomiting (rumination)
   - (g) Gastro-enterospasm
   - (h) Pyloric stenosis
   - (i) Congenital deformities of the gastro-intestinal tract, miscellaneous abdominal conditions
   - (j) Dehydration, anhydremia, and inanition
   - (k) Intracranial conditions
   - (l) Toxic states

AN INVITATION TO PHYSICIANS OF LAUREL, JONES COUNTY AND NEAR-BY VICINITIES

The postgraduate lectures in pediatrics, sponsored by the Mississippi State Medical Association and approved by the Mississippi State Pediatric Society, will be begun as scheduled in the South Mississippi Charity Hospital, Laurel, Mississippi on Monday, July 20 at 7:30 p. m. o'clock. The lectures will be conducted by Dr. Robert A. Strong, of New Orleans. The hour and place of meetings are subject to change to comply with the wishes of the majority of physicians.

A cordial invitation is extended to every physician in Laurel, Jones County, and nearby vicinities to attend these lectures so ably executed by Dr. Robert A. Strong, Professor of Pediatrics, Tulane University School of Medicine. The Mississippi State Medical Association has established a permanent program of postgraduate medical instruction in obstetrics, pediatrics, general medicine and the like. The Committee on Postgraduate Medical Education realizes the necessity of conforming to the wishes of the profession in conducting this program and it invites suggestions and comments of those who are in touch with its work.

FIELD CLINICIAN AND INSTRUCTOR

Dr. Strong is a graduate of the School of Medicine, Tulane University of Louisiana, 1907; Postgraduate study in London, England, and at various German Pediatric centers; Professor and Head of the Department of Pediatrics, School of Medicine, Tulane University of Louisiana, and of Graduate School of Tulane University, since 1929; Visiting Physician in Charity Hospital, Touro Infirmary, and Baptist Hospital; Lieutenant Colonel, Medical Reserve Corps since 1919. Fellow and Charter Member of American Academy of Pediatrics; Member of American Medical Association, Southern Medical Association, Louisiana State Medical Society, Louisiana State Pediatric Society; Co-author of Tice's Practice of Medicine and Brennemann's Pediatrics; Editor of International

Medical Digest; Editorial Board of Journal of Pediatrics.

OFFICE CONSULTATIONS

All of Dr. Strong's time outside of class hours is available for conferences and consultations with individual physicians for instructional purposes. The Committee wishes to promote the fullest possible use of Dr. Strong's services. Therefore, physicians are urged to take advantage of this opportunity and utilize Dr. Strong's time while he is in the community.

COMMITTEE ON POSTGRADUATE MEDICAL EDUCATION

Dr. Harvey Garrison, Dr. T. M. Dye, Dr. C. C. Bass, Dr. J. W. Lipscomb, Dr. H. W. Kostmayer, Dr. L. S. Lippincott, Dr. W. H. Anderson, Dr. Felix J. Underwood.

SPONSORS

Mississippi State Medical Association, Mississippi State Board of Health, Tulane University Graduate School of Medicine, Tulane University School of Medicine, Mississippi State Hospital Association.

The New American Medical Directory*

The Fourteenth Edition of the American Medical Directory has been completed and copies are now available for general distribution.

The directory, with nearly twenty-five hundred pages, is a vast storehouse of information. It contains not only the most complete list available of the physicians of the United States and its dependencies and of Canada, but much additional data which hospitals, libraries and various other institutions, as well as individuals, will find useful and readily available. The directory is the only nationwide register of physicians in which the extensive data on medical education, licensure and society affiliations have been verified.

The 1936 edition contains 183,312 names, or 4,796 more than were in the previous edition issued in 1934. The names of 13,157 physicians have been added and 7,684 names have been removed because of death. More than 70,000 changes of address have been made, in addition to thousands of changes in society affiliations, teaching positions, specialties and office hours.

In this edition, thirty-two states show an increase in the number of physicians; New York leads the list with 1,201, followed by California (369), Pennsylvania (281), New Jersey (262) and Massachusetts (249). A slight decrease in the number of physicians is shown in Missouri, Georgia, Kentucky, Tennessee, Oklahoma, Alabama, Indiana, South Dakota, Maine, Vermont, Mississippi and New Hampshire. When the thousands of changes of location are analyzed they seem to show a noticeable migration of physicians to larger towns in the South Central states, a tend that was previously present also in some other sections of the country.

The first section of 221 pages in the new directory includes the constitution and by-laws of the American Medical Association, the Principles of Medical Ethics, and a list of meeting places of the annual sessions of the Association since the first one in 1847, with the names of the President installed during each meeting. In this section also are lists of the hospitals that are approved for intern training, the medical libraries, the medical journals published in the United States, Canada, the Philippine Islands and Puerto Rico, the names of medical officers of the various government services, the national organizations for the various specialties with the names of their members, the membership of the new examining boards for the specialties, the medical schools in the United States and Canada with a brief history of each, and the members of the National Board of Medical Examiners.

The second section is arranged by states. There is published under each state the medical practice act, the members of the board of medical examiners, members of the state board of health, county and city health officers, and officers of the state, district and county medical societies. Following this is a list of 7,220 hospitals, sanatoriums and related institutions arranged by towns, with the name, location, bed capacity, superintendent, and type of patients treated in each institution. Then, arranged by towns, comes the great list of physicians, giving the year of birth, school, year of graduation and license to practice, membership in the state society and special societies, professorships, and Fellowship in the American Medical Association. The home and office addresses and office hours also are given for physicians in towns of more than 10,000 population.

A new feature in this edition is a key letter showing that a physician has been certified as a specialist by an approved examining board. Several of these boards have been approved by the Council on Medical Education and Hospitals since the directory went to press. The next edition, therefore, will contain a more complete list of certified specialists. An especially interesting feature of the 1936 edition is the list of American physicians temporarily located in foreign countries.

The third section, of 525 pages, is an alphabetical index of the names of 183,312 physicians and practically every name is followed by the name of the city and state, thus indicating where in the director detailed information about the individual physician may be found.

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*Reprinted from the Editorial department of The Journal of the American Medical Association July 18, 1936, Vol. 107, pp. 214 and 215

The bringing to completion of the Fourteenth Edition of the American Medical Directory has been a monumental task, in the pursuance of which thousands of individuals, societies, licensing boards, medical colleges and other organizations have cooperated. For their ready cooperation and assistance the American Medical Association is thankful and deeply appreciative.

Insurance Medical Directories

The attention of all members is called to the following resolution adopted by the Society at the Hot Springs meeting April 29th:

"WHEREAS, certain commercial interests are publishing medical directions, listing physicians by specialty and otherwise, as available for insurance and compensation work, and other professional services, and

WHEREAS, participation by listing in these lay publications merely serves for the profit of the promoters, and is furthermore technically indirect solicitation of patients.

THEREFORE, BE IT RESOLVED, That the Arkansas Medical Society condemns these practices as unethical and forbids its members to continue listing their names in such directories, and

BE IT FURTHER RESOLVED, That the Arkansas Medical Society requests the House of Delegates of the American Medical Association to take similar action."

The resolution was presented to the House of Delegates of the American Medical Association and referred to the Judicial Council for study. The Judical Council approved the resolution and recommended its adoption, which the House of Delegates did at the session of May 14th, 1936.

The attention of our members has been previously called to the activities of these directory publishers. As is often the case, individual physicians felt that they might incur a loss if they removed their names from such directories while other members retained their listing. With this thought in mind, the above resolution has been adopted. The practice of so listing is declared unethical; no individual member may now feel that should he remove his name that another physician will accept that listing. The benefit is direct to these physicians in the fees saved; the loss is entirely the promoters.

Some idea of the financial gains involved in the publication of these directories may be understood when we state that one directory now on our desk contains the names of approximately 5,000 physicians. Ninety-two Arkansas physicians are listed in the three directories available to The Journal. The fee charged for listing in this one directory is $15.00 per annum. A liberal estimate of the cost of publication and distribution is $15,000. The balance, $60,000, is presumably divided between the promoter and his solicitors. Verily, a most altruistic motive prompts the publication.

This seems to us to be a good piece of work performed by the Arkansas Medical Society. We heartily commend them for this. This is the fair and the just thing to do, puts every man on a more equal footing and saves thousands of dollars each year, as you see.

Section Chairmen Appointed

The following chairmen, vice-chairmen and secretaries of the various Section of the Mississippi State Medical Association have been appointed.

Section on Eye, Ear, Nose and Throat: Robin Harris, Jackson, Chairman; C. C. Buchanan, Hattiesburg, Vice-Chairman; Hugh Johnston, Vicksburg, Secretary.

Section on Medicine: Joseph E. Green, Laurel, Chairman; B. Lampton Crawford, Tylertown, Vice-Chairman; Stanley Hill, Corinth, Secretary.

Section on Hygiene and Public Health: Felix J. Underwood, Jackson, Chairman; T. P. Haney, Jr., McComb, Vice-Chairman; N. C. Knight, Clarksdale, Secretary.

Section on Surgery: Dr. Willis Walley, Jackson, Chairman; H. Lowry Rush, Meridian, Vice-Chairman; W. H. Anderson, Booneville, Secretary.

Kindly list these appointments in your minutes, and also the members of the Advisory Council of the Woman's Auxiliary to the Mississippi State Medical Association. My information is that the President, President-Elect and the Secretary of the Mississippi State Medical Association are members of the Advisory Council by virtue of their office. In addition to these officers I have appointed two other doctors to serve on this council.

Advisory Council— Woman's Auxiliary to the Mississippi State Medical Association: Dr. Harvey F. Garrison, Jackson; Dr. W. L. Little, Wesson; Dr. T. M. Dye, Clarksdale; Dr. Leon S. Lippincott, Vicksburg; Dr. A. G. Wilde, Jackson.

Snapshots From the Poliomyelitis Field

Dr. Felix J. Underwood, Executive Secretary of the Mississippi State Board of Health, and on the right Dr. Charles Armstrong, of the United States Health Department. This was taken in Iuka, Miss., a few days ago while they were in Northeast Mississippi making a survey of the poliomyelitis situation.

This is a family in Northeast Mississippi in which was found a case of infantile paralysis. The child in the mother's lap is the one affected.

This is a little colored boy, of West Point. A victim of the recent outbreak of poliomyelitis. The left leg is involved, you will note.

Dr. Harvey Garrison, President of the Mississippi State Medical Association and a Counsilor of the Southern Medical, is urging you to attend the annual meeting which will be held in Baltimore in November 17-20. You should heed his advice. It is one of the very best meetings held in the United States. It will always do you good to go to Baltimore, "The City of Charm and Achievement" and "Birthplace of the Star Spangled Banner," and breathe the literary and medical atmosphere for a few days. The public meeting last year, the second night, was well worth the trip to St. Louis. No doubt this plan will be followed again. This was the best one feature of the meeting last year in our opinion. We imagine that the honest, able, and fertile brain of Mr. Loranz gave birth to this idea. Let us join Dr. Garrison and go to the Southern Medical in November. Let us go for our own good, for the good of our clientele and at the same time we can pay a compliment to our popular president who has been an officer in the Southern Association for a number of years. Our National Capital is near Baltimore. It will be nice to visit Washington on this trip. Write for your reservation now.

Suggested Baltimore Hotels: Lord Baltimore Hotel, Southern Hotel, Belvedere Hotel, Emerson Hotel, Rennert Hotel, Congress Hotel, New Howard Hotel, Stafford Hotel, Altamont Hotel, Mount Royal Hotel, Arundel Hotel, Biltmore Hotel.

If one writes to the hotel of his choice and does not hear within a reasonable time, or if any hotel has reservations up to its capacity, write the local Hotel Committee, of which Dr. Lawrence R. Wharton, 1201 North Calvert St., Baltimore, is Chairman.

From the Southern President we have the following message:

To Every Member of Organized Medicine in the South:

It is an honor and a great pleasure to extend you a cordial invitation to attend the meeting of the Southern Medical Association in Baltimore in November.

The various committees in Baltimore have been working unusually hard to make this one of the best meetings the Association has ever held. I feel sure you can look forward to an excellent scientific program and exhibit, and in addition a delightful visit to one of our loveliest cities where everyone is determined to make your stay there both interesting and enjoyable.

Sincerely yours,

FRED M. HODGES, M.D., Pres.
Southern Medical Ass'n.

MISSISSIPPI STATE MEDICAL ASSOCIATION
and
COMPONENT SOCIETIES

The Significance of Bleeding From the Lower Gastro-intestinal Tract*

FRED W. RANKIN, M.D.
Lexington, Kentucky

The most important symptom of organic lesions of the lower gastro-intestinal tract, whether benign or malignant, is blood on the stool or mixed in the stool. The nature of the blood, bright red or dark, or responding to tests for occult blood leaves one with the opportunity to either guess or investigate the entire gastrointestinal tract for its source. As a danger signal however, and a warning that there is a break in the mucous membrane of the bowel from which the blood is leaking, any tendency to ignore this symptom is a distinct dereliction of duty and if persisted in leads to unfortunate consequences.

The lesions which cause bleeding from the lower bowel may be divided into first, malignant lesions such as carcinoma and sarcoma; second, benign lesions such as hemorrhoids, fecal impactions, fissures, local ulcerations due to trauma, venereal diseases, or strictures, and ulcerations due to constitutional diseases such as diabetes, nephritis, cirrhosis, fever, blood dyscrasia, agranulocytosis, amoebic dysentery, chronic ulcerative colitis, intussusception, diverticulitis, polyps and polyposis; and third, granulomatous diseases such as tuberculosis, actinomycosis, syphilis, non-specific granuloma, and lymphogranuloma.

Obviously the differential diagnosis of all of these lesions is beyond the scope of this paper, but equally obvious is the fact that when a patient presents himself or herself for a diagnosis emphasizing or even mentioning blood in the stool or on the stool as one of a group of symptoms, a large number of possibilities should immediately come to mind. Of partial assistance in the differential diagnosis is the type and character of the bleeding. Gross red blood either on the stool or in the stool is positive proof that the lesion, if it be an organic one, is in the colon or rectum.

If the blood be clotted, dark, and in appearance not the result of recent bleeding, the diagnosis generally is directed higher up toward the gastroduodenal portion of the gastrointestinal canal. One cannot however, rule out lesions of the right half of the colon when the blood is black and of not too recent origin because frequently the hemorrhage may be of a slow leaking variety and blood remain in the bowel long enough to undergo digestive changes.

A positive response to the benzidine test for occult blood usually is indicative of a lesion in the upper gastrointestinal tract or right colon. Occasionally one is directed to the proper diagnosis by a positive occult blood test when the x-ray of the lower gastrointestinal tract and the proctoscopic examination are negative and a duodenal ulcer cannot be diagnosed, by thinking of and investigating for a Meckel's diverticulum which harbors a peptic ulcer. This lesion is of rare occurrence, yet I have seen two such cases and numerous reports of similar experiences will be found in the literature.

HEMMORRHOIDS—Probably the most frequently encountered lesion of the rectum is hemorrhoids, benign, but presenting symptoms often mimicking carcinoma and always to be looked upon as possibly associated with a lesion higher up in the bowel. The tendency to treat hemorrhoids without examination is responsible for an appalling number of tragedies which are discovered later when a carcinoma is found on more careful examination.

Buie makes the startling statement in his splendid monograph on hemorrhoids, that out of a series of 1937 patients which he examined he found that out of every five patients with carcinoma of the rectum or sigmoid, one had been operated upon for hemorrhoids or treated symptomatically for intestinal irregularities. Certainly 20 per cent is an astonishingly high percentage of wrong diagnoses in an area so easily accessible for actual digital and visual examination. The frequency with which hemorrhoids occur is further illustrated by the same author's figures who found that 49 per cent of patients with a bowel complaint are suffering from hemorrhoids.

The two most frequent symptoms of hemorrhoids are protrusion and bleeding; protrusion occurring in 95 per cent of the cases, and rectal bleeding in 89 per cent. Pathologically, hemorrhoids are due to changes in the venous system of the rectum and no demonstrable microscopic changes in the arteries have been demonstrated. Whether infection plays the important role, or one of the other agencies so frequently mentioned by proctologists, is not the factor under consideration. The veins are thinner rather than thickened, hypertrophied and dilated, and show degenerative changes.

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*Read before the Section on Surgery at the Sixty-Ninth Annual Session of the Mississippi State Medical Association, Greenville, May 5, 1936.

There is an excess of these veins in the bleeding hemorrhoids and thrombosis is a common occurrence. With thrombosis, with venostasis, and with trauma due to constipation and passage of scybalous masses, certain infection easily takes place and bleeding occurs as an early symptom. The obvious corollary to this assertion is that bleeding from the rectum should always be considered as coming from a malignancy and while it will usually be proved to be due to a benign condition, (hemorrhoids in one-half of the cases), many of the unhappy traegdies of late carcinoma of the rectum will be avoided if this attitude is supported. Certainly, it seems indefensible that any case should be operated upon for hemorrhoids without a digital and proctoscopic examination. That this is constantly being done however, is the reason for my mentioning it in this discussion. Certainly, digital examination would discover many of the lowlying carcinomas and establish the proper diagnosis if that were the only examination made, but proctoscopic examination is easily done and will verify or exclude carcinoma as high up as the terminal sigmoid.

POLYPS AND ADENOMATOSIS—Polyps, single, multiple, or diffuse, constitute a definite percentage of organic lesions for which bleeding is one of the most important and frequently one of the earliest symptoms noticeable. Polyps are usually benign lesions not only in their early stages, but for a long period of time.

Pathologically, polyps may be adenomata, papillomata, fibrolipomata, or any pathological variety of tumor which swings from a stem. Actually, most polyps are adenomatous in their beginning and it is equally true that many of the adenomatous polyps existing in such profusion as to warrant the term adenomatosis, do undergo malignant degenerative changes which are evidenced by bleeding as one of the most prominent and early symptoms.

Polyps of the colon may grow to large sizes. They may even produce intussusception by the effort of the bowel to extrude them, and cases are on record where actual polyps have been amputated and passed "via naturalis." The polyps with which we are most concerned are the diffuse adenomata which occur usually in the rectum in profusion, but are scattered throughout the entire colon, varying in number in the different segments but being recognized as of two classes: first, the familial adenomatosis; and second, pseudo-adenomatosis, the result of some inflammatory lesion such as chronic ulcerative colitis, tuberculosis, or some dysentery of long standing. That group of adenomata commonly designated as polyps of the familial variety are of particular interest in that 50 per cent or more of these cases persisting over a period of years, show a distinct tendency to undergo malignant degeneration.

CHRONIC ULCERATIVE COLITIS—Chronic ulcerative colitis has been definitely proved to be an infectious process due in many instances to the diplostreptococcus of Bargen. This organism has been repeatedly isolated and grown in culture when obtained from rectal lesions of patients having the disease. It is usually a diffuse inflammatory process which more frequently begins in the rectum and tends to extend proximally to involve variable portions of the colon.

In rare instances the process may involve in a segmental manner parts of the colon above the rectum and the rectum may appear normal. The diagnosis may be suspected when there occurs in young adults usually cramps with a diarrhea characterized by frequent passages of blood and mucus, varying from ten to twenty stools a day and night. This process may become so acute as to greatly deplete the patient.

The diagnosis can almost with certainty be established by proctoscopic examination. The picture is usually one of a diffuse inflammatory reaction involving practically the whole mucosa by petechial ulcers which appear like small points, and which bleed from the slightest trauma. As the process becomes more chronic there is a tendency for the usual valvular formations to be effaced by a thickening fibrotic process which markedly reduces the caliber of the lumen. The mucosa tends to become glazed and glistening in appearance, and may contain minute and microscopic scars.

In well over 80 per cent of the cases, cultures taken directly from any part of the affected bowel will when transplanted to brain broth, grow a positive culture of the diplostreptococcus of Bargen. In the very chronic and long-drawn-out cases, in addition to the above proctoscopic findings, there may develop multiple fissures and sinuses around the rectum to the extent that there are many draining openings with marked constriction at the outlet, and with dense, firm stricture formation.

An x-ray of the colon by barium enema is usually indicated to determine the extent of the colonic involvement above the areas which come in the range of the proctoscopic field. The involved colon will have a loss of the usual haustral markings, narrowing, and tubelike reduction in the lumen, and with an apparent shortening of the colon. In the acute stages there is a "fuzziness" and indistinctness of the bowel outline.

CANCER—The most important lesion of which bleeding from the rectum is a symptom is, of course, carcinoma. Malignancy of the rectum is too frequently allowed to progress to an advanced stage before it is recognized, but not before it is treated. Varying reports from the clinics of different surgeons indicate that anywhere from ten to twenty-five per cent of cancers of the rectum are operated upon for hemorrhoids within the period of their symptoms without having been properly examined either digitally or proctoscopically.

Blood on the stool or in the stool is perhaps the most frequent symptom of cancer of the rectum for which a physician is consulted, and in about one-third of the cases it is the first symptom of cancer of the rectum. Unfortunately, there are no early pathognomonic symptoms of malignancy of the lower gastrointestinal tract and bleeding, irritability, change of bowel habit, etc., which send the individual for examination, are usually the result of secondary changes in the growth.

Cancer of the rectum begins in the submucous glands or polyps, and develops over a period of time until ulceration follows necrosis and bleeding is the result. The average cancer of the rectum is a full grown, adult tumor when seen for the first time by the surgeon. While it is axiomatic that the majority of cases presenting themselves because of bleeding from the rectum are suffering from benign lesions, malignancy occurs frequently enough, and because of the mimickry of benignancy, is delayed enough of diagnosis to warrant a repetition of this fact not once, but frequently even at the instance of being tiresome.

When one recognizes that the average cancer of the rectum has been present for an average of about eleven months, it is quite obvious that the advanced stages of these growths are being seen and not the earlier stages in which cure is so much more readily obtained because of the lack of metastatic deposits in the regional lymphatics. Forty-six per cent, almost one out of two cancers of the rectum, have metastasized to the regional glands when operative interference is instituted. Even with this enormous handicap, the prognosis curve from cancer of the rectum treated radically by extirpative maneuvers shows a higher percentage of five-year cures with a higher operability and without higher mortality figures than for cancer elsewhere in the gastrointestinal tract.

A reduction of mortality and morbidity in surgery for cancer of the rectum can be attributed in a great part to the marked improvement in the preoperative preparation of these cases, most of which have some degree of obstruction which requires special treatment to relieve the toxemia and infection.

Above all other measures, careful decompression of the bowel by frequent colonic irrigations extending over a period of five to seven days has probably done more to improve the status of these cases than other efforts. With low rectal growths in addition, mild laxatives may be administered with impunity. Growths located at the rectosigmoid and in the left half of the colon because of their circumscribed nature and the relative small size of the bowel more frequently become acutely obstructed and for this reason laxatives are not administered in these cases.

In so far as some degree of obstruction has existed on an average of several weeks or months in most of these cases, the patients have become depleted, dehydrated, and undernourished, and require a definite period of rehabilitation. A non-residue diet high in carbohydrates adequately meets this demand. With the proper preparation of the bowel by enemas, and rehabilitation by diet and blood transfusions, deaths from peritonitis have been markedly reduced.

With knowledge of the lymphatic drainage of the rectum and rectosigmoid as carefully worked out by Mr. Miles, it is no longer questionable that hope for cure of cancer in this region requires extensive and radical resection. In most instances, probably with the exception of age, general debility, and fixation of the local growth, a combined abdomino-perineal resection of the rectum is the operation of choice.

At one time this procedure was accomplished in two stages wherein a single-barrelled colostomy and exploration was done at the first time to be followed in ten to fourteen days by a resection of the distal colon and rectum. By greater freedom and mobility of the rectosigmoid and preparation of the peritoneal flaps for the pelvic floor, this procedure can now be done as quickly and easily as either of the former stages in doing the two-stage operation, but still is available only in selected cases.

A low mid-line incision is made, the peritoneal flaps are liberated from either side and from the bladder or uterus as the case may be, and the inferior mensenteric artery is doubly ligated and cut after a careful identification of the ureters. Most of the rectum can then be dissected from the levator ani muscles as they sweep down and support it as it passes out of the peritoneal cavity. By completing most of the operation from above, bleeding is more easily controlled and the procedure is executed with greater accuracy and speed.

With the liberation of the inferior mesenteric vessels, preparation of the peritoneal flaps, and dissection of the rectosigmoid and upper rectum from the concavity of the sacrum, clamps are then placed on the colon at the site elected for the colostomy. The colon is cut at this level and the proximal end brought out through a stab wound in the left groin as a single-barrelled colostomy. The distal end remains occluded by a clamp or suture and is dropped into the hollow of the sacrum.

The new pelvic floor is now accomplished by approximating the flaps which have been previously prepared. The abdominal cavity is closed and the patient turned on his right side with his knees flexed into the abdomen in preparation for the perineal part of the resection. After the anus has been occluded by a purse-string suture, elliptical incisions circumscribe it extending from the tip of the coccyx anteriorly to the center of the perineum. The skin flaps are made wide with the intention of removing large sections of the skin and fat in the ischio-rectal fossa which may harbor lymphatics thus offering a source of acutal potential malignant extension.

The tip of the coccyx is removed giving greater access to the sacral concavity. If the dissection from above has been sufficient, as soon as the posterior fascia is incised, the distal colon and rectum can easily be delivered into the wound and separated from its attachements to the levator muscles. A very large cavity is left in the sacrum which must be packed with five to ten yards of gauze to support the recently constructed pelvic floor. This pack remains for 48 to 72 hours before it is removed, by which time the pelvic floor is usually strong enough to serve its purpose. This cavity, however, is not entirely obliterated and remains for three to five weeks during which time daily cleansing irrigations are given to prevent infection and facilitate healing.

The immediate postoperative reaction in these cases is quite remarkable. Probably one of the factors chiefly concerned is the routine administration of blood transfusions within two hours after the operation. This in some manner combats or prevents shock and untoward reactions. Rarely do these patients have any severe postoperative reaction. This has been chiefly noticed since the standard use of transfusions.

Adequate fluids varying from 3,000 to 5,000 c.c. are given daily the first three to five days by hypodermoclysis and intravenous routes. This procedure maintains body fluids and puts the gastrointestinal tract at rest, and has practically eliminated distenion, nausea, and vomiting. Within 48 hours the colostomy may be opened which allows for the escape of gas and liquid bowel content. Any time after this, fluids are given by mouth in gradually increasing quantities promoting the patient's tolerance and comfort.

The reduction of mortality in this operation as well as the high percentage of five-year cures, make it more desirable to employ in as many cases as possible, but one must not lose sight of the fact that many of these cases are too high surgical risks to indulge in a single-stage operation and for that reason this operation done in two stages by a technic which I published in the February, 1935 issue of the American Journal of Surgery, and the Mummery operation of colostomy and posterior resection must be employed occasionally.

Prognosis figures which range from Mr. Miles' high figure of 79 per cent down to the 38 per cent following the colostomy and posterior resection, are encouraging. In the hands of the skilled surgeon, five-year cures of 50 to 60 per cent are reported in an increasing number of series. The mortality curve likewise is being reduced by increasing the safety factors outlined above, and in my own service I have done 107 combined abdomino-perineal resections of the rectum in one and two stages, with eight deaths—a mortality of 7.5 per cent. In this series the last 22 cases done in one stage by Miles' technic have been accomplished without any mortality.

Considering the hopeful prognosis of cancer of the rectum when operated upon radically, as well as the increase in safety factors and diagnostic acumen within the past ten years, the further offensive against malignancies in the lower gastrointestinal tract must come in a large measure by more careful efforts to shorten the time of existence of these tumors before they are turned over to the surgeon for operation.

Chronic Arthritis*

WALTER E. JOHNSTON, M.D.
Vicksburg, Miss.

Arthritis is the oldest disease of which there is historic and authenic record, for prehistoric man, and even reptiles of geological periods which antedated the appearance of man, were ravaged by this malady. To the average general practitioner it is one of the most difficult diseases he attempts to treat. It is the purpose of this discussion to correlate as briefly as possible what has taken place in recent years in the development of more accurate diagnosis and more specific treatment for chronic nonspecific arthritis.

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Chronic non-specific arthritis is divided into two fairly definite groups: first, osteo-arthritis or hypertrophic, and second, rheumatoid or chronic infectious arthritis.

Osteo-arthritis is a degenerative arthritis of the senile type usually seen in people over fifty years of age who are apparently in good health but usually overweight in which the onset of pain and stiffness in the joints are usually insidious. There is degeneration and thinning of the cartilage with new growth of bone around the edges of the joints involved, principally the spine, knees, knuckles, feet and shoulders, but without fusion of the articular surfaces. This affection, which is a disorder of cartilage and bone, is not thought to be infectious in origin.

Rheumatoid arthritis is of the chronic infectious type which is seen in individuals usually under fifty years of age and in individuals who are under-weight and undernourished. This type of arthritis is thought to be due to some primary focus of infection, such as in the teeth, tonsils, sinuses, gallbladder, cervix, prostate, colon, etc. The first attack is often acute, but the onset may also be very gradual. There are local inflammatory and proliferative changes in the joints, great pain and tenderness and limitation of motion, migration from joint to joint, and enough new growth of fibrous tissue about the joints to cause persistent periarticular swelling. Ankylosis, which is very common in this type of arthritis, usually does not appear until after the patient has suffered several attacks.

Treatment of chronic arthritis is not nearly so simple as the classification. It would take a volume to list the number of treatments that are used with some success by doctors throughout the world. Only a few of the ones that are considered by a majority of the profession as being of value will be discussed.

Treatment of osteo-arthritis will be considered first. In the treatment of this form of arthritis it should be borne in mind that the damage to the joint has been done and there is little chance of remedying this so the treatment will be more or less palliative, all efforts being to relieve the pain. Due to the fact that there has been much destruction to the joint surfaces it is absolutely necessary that the affected joints be used as little as possible. Weight bearing on such a joint should be reduced. Climbing stairs should be discouraged and the patient advised to live on the ground floor. If his occupation is one that requires too much use of the joint such occupation should be changed. As a large majority of these patients are somewhat overweight an effort should be made at reduction by the use of a low caloric diet. Thyroid extract should be used if the obesity seems to be from thyroid disturbance. Hydrotherapy is one of the oldest forms of treatment and is still considered by some as the best. The water should be not over 104 or 105 degrees F. The addition of various salts is unnecessary. Diathermy is of great value in some cases. Massage is also important. Faulty posture should be corrected by the use of splints, braces, corsets, etc. The drugs most commonly used are iodides, salicylates and some calcium preparation such as calcium gluconate.

In the treatment of rheumatoid arthritis focal infection still holds an important place. With the years has come a more accurate appraisal of the undoubted benefits and the equally definite limitations of removal of focal infections. On the positive side it has been shown that in the mild forms of rheumatoid arthritis, in the early stages, removal of foci, especially diseased tonsils, will in a high percentage of the cases produce a prompt remission and, in a smaller number, lasting recovery. It should be emphasized that the tonsils are not the only possible source of infection. Abscessed teeth and severe pyorrhea come next in the order of frequency. More rarely the prostate, the colon, the sinuses, the gallbladder and the cervix may act as the focus of infection in any given case.

In the treatment of this type of arthritis it should be borne in mind early that the disease is one in which ankylosis is the end result and unless steps are taken at the beginning, deformity will occur. Therefore, it is as necessary to prevent deformity as to control the disease itself because in the past it has been found that many patients who have been cured of arthritis have been unable to lead a normal life because of the deformities that have resulted. The keynote of prevention of deformity then is to anticipate what is likely to happen and to see to it that flexion, which is the chararacteristic deformity of all rheumatoid arthritis, does not occur. If nature's attempt at splinting is anticipated and the joint is put at rest in light plaster splints before the muscles have been brought into play to protect it, the necessity for muscle spasm is avoided. The patient relaxes the protected joint with comfort. Rest is secured with the relief from strain and irritation. The artificial protection is given the joint before the muscles have had a chance to produce flexion deformity. It has been found that the disease itself subsides much more quickly, the patient has more comfort, requiring less analgestic medicine, and the acute stage of the disease is materially shortened. Early protection is necessary. however, to accomplish this end.

VACCINE.—In recent years the treatment of this form of arthritis with vaccine has attracted considerable attention and discussion. This form of therapy has been based for the most part on the assumption that the streptococcus is the etiologic factor in the production of chronic arthritis. There are two methods of vaccine therapy, subcutaneous and intravenous. The intravenous method seems to be the most popular. (Parke, Davis & Company prepares a "Streptococcus Immunogen Arthritis" which is given at weekly intervals increasing the dose about 0.1 c.c. until the maximum dose of 2.0 c.c. is reached).

NONSPECIFIC PROTEIN THERAPY.—This is the therapy of choice of many and is apparently gaining in popularity. Typhoid vaccine is most commonly used for this purpose. The initial dose should be about 0.1 c.c. and it may be increased every third day 0.1 c.c. until the maximum dose of 0.5 c.c. is reached.

If an increase in temperature is desired the dose may be repeated in about two hours. Morphine may be given at the same time to prevent pains which accompany the reaction. This does not interfere with fever.

DIET.—There is some difference of opinion as to the diet in this type of arthritis. There has been much work done to show that there is a low sugar tolerance in these cases and that a low carbohydrate diet is essential. Other workers have proven that this is not the case and that the low sugar tolerance is due to other systemic changes and not to the arthriis. It is a fairly universal opinion that the debility and the anemia which often accompanies these infections can be materially reduced by careful selection of food. A nourishing diet which includes not only sufficient vitamins and minerals but also liberal quantities of good protein, chiefly as muscle meats and liver, is desirable. It has also been shown that a majority of these cases show colonic abnormalities such as reduplication, ileocecal valve incompetence and lack of haustral markings. A vegetable diet plus a liberal supply of vitamins will correct this condition.

DRUG THERAPY.—Probably every drug known to mankind has been used at one time or other in the treatment of arthritis but there are relatively few that have any appreciable value. In review of the literature two drugs were found to possess fairly definite curative value. The first of these drugs, sodium aurothiomalate (myocrisin), a gold salt, has been used with fairly satisfactory results in tuberculosis in Europe and it is in England where much work is now being done with it in the treatment of chronic arthritis. Myocrisin may be given intramuscularly at weekly intervals for eight or ten weeks. It is necessary that more than one series be given for beneficial results. It is not advisable to administer gold salts orally. The second drug is chaulmoogra oil, a drug which has been used with much success in the treatment of leprosy. Many leprosy patients who were suffering with chronic arthritis were greatly benefited after they had received chaulmoogra oil. A large number of patients suffering with chronic arthritis but without leprosy showed equally as good results. Chaulmoogra oil may be given intramuscularly or by mouth.

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DISCUSSION

DR. THOMAS H. BLAKE (Jackson): First, I would like to thank Dr. Johnston for this very instructive paper and for the privilege of this discussion. He has brought out a number of points that are very helpful.

My small experience with arthritis has been mostly from a corrective or orthopedic standpoint and the result is I am not full capable of a detailed discussion of its medical treatment.

The hypertrophic type of arthritis is usually found with advancing years and can not be directly traced to any definite focal cause. x-ray pictures made of any individual past mid-life will nearly always show some increased density about the margins of the joints, or some lipping. These changes are hypertrophic and the patient may be absolutely symptom free, yet he has the arthritis. I compare such cases to an individual who has reached the stage in life where it is necessary to wear bifocal glasses. We make no effort to cure his eyes but simply give him relief. In the case of hypertrophic arthritis, I think the main treatment should be palliative. These patients usually need rest but do not give them absolute rest, as some motion should be kept in these joints or they will tighten up and will have less motion present than when the treatment began. Physiotherapy, especially baking and massage with passive motion is excellent. Any existing deformities should be corrected, if possible.

The rheumatoid type of arthritis, which is usually found in young individuals, is usually multiple, progressive and is of the ankylosing type. Frequently, it will start in one joint and jump to many others, the first joint clearing up completely, yet the secondary joints involved will have an extreme invasion with marked destruction and deformity. Unless properly treated, these patients will usually flex their joints into the most comfortable standpoint. Regardless of how slight the infection, a joint should be treated as if an ankylosis is expected and regardless of the outcome, that member will be in a usable position. These positions and appliances have been beautifully brought out by Dr. Johnston with his lantern slides. After ankylosis has occurred, it must be remembered that these patients are not in a hopeless condition but an arthroplasty can be done, which in a large per cent of the cases, will restore fifty per cent or more of the motion to a joint and add a great deal to the patient's comfort and use of the part affected.

From the medical standpoint, my experience is limited. However, I do advocate the use of the various arthritic vaccines made up by the many biological houses. In some cases these seem to work miracles. Of course, the foci of infection should be removed, as demonstrated to me recently by a case I was treating. This individual had been treated by many doctors and finally fell into my hands, complaining of extensive painful, swollen, inflamed joints. I placed him on small doses of magnesium sulphate, twice daily, and at the end of seventy-two hours, he was greatly relieved. This, of course, may be purely incidental to his other treatment but the point remains not to overlook the colon as a focus of infecion. Foreign proteins are of some value, especially in those cases in which the patient has very little fever or leukocytosis. Of the preparations in use, I personally prefer several doses of 5 c.c. of boiled skimmed milk, given deeply into the gluteal muscles. The reaction from this is a very unpleasant one and due to the unpleasant reaction, the drug houses have developed many split proteins which they claim give these patients the same response without the unpleasant reaction. It is my belief that the fever induced by the milk injection, is desirable and when this reaction is done away with, a portion of the benefit of this type of treatment has been destroyed. Until some better treatment has been brought out, I think the general care of these cases should be along the lines of those brought out by Dr. Johnston.

Again I want to thank Dr. Johnston for his splendid paper and for the privilege of this discussion.

DR. JOHN B. HOWELL (Canton): In speaking of this most excellent paper, in these cases that we have, the genito-urinary tract should not be neglected. A great number of these old men have prostate trouble, and the women have trouble with the cervix, and that is where we have found a great many of our foci of infection.

In speaking of treatment of these arthritics, I believe the use of a prolonged vaccine, starting with small doses intravenously does have some effect. Whenever a patient returns for more treatment of the same kind you can feel that you have done something for him, and the streptococcus vaccine by Lilly is probably the best of those types of vaccine. The only difference in that and some other vaccines is he probably gives larger doses and over a longer period of time.

DR. W. H. FRIZELL (Brookhaven): I wish to ask some questions of Dr. Johnston rather than make suggestions, because I am intensely ignorant. I do not think that Dr. Johnston or any one else should feel ashamed for not knowing anything more than he does about arthritis, for the best of us and the authorities don't seem to know any more than we do. I would like to ask him what he does with those chronic cases that have been chronic and reporting for treatment and ankylosis has already begun, and you have your osteo-arthritis. And what effect does your traction and slight manipulation do?

Another thing, you did not bring out very clearly why early in the morning you find these patients always worse; they are more painful when they get up and start about. It is proof that passive or slight movement of the joints gives you relief; that accounts for the pains and aches early in the morning; that gives us a clue to the treatment of that type of case.

Now then as to foreign protein. I have had in my limited experience the acute types and chronic types—those that come to us later. I find one patient can use a certain foreign protein and improve for a while and assumes the attitude that he doesn't improve any more. Shift your treatment to another type of protein. It is all empiric any way, and the patient will say, "That has helped me more than anything else."

In patients to whom Dr. McIlhenny has given a sacral injection which made the patient worse after the second, he had given no more. Shift your treatment and you will find a continued improvement, even from the start, but there is one thing I have profited by, without diminishing the dose in the chronic patients the longer the interval the better; you do not want to produce too much reaction in that type.

Another thing he stressed was diet. You are what you eat and drink, whether you think it or not, and I was glad to see him bring that question out, so watch the sugars and the acetic group. They do not tolerate either one of these, and strange to say most dieticians will recommend tomato juice. You will find more arthritic reaction to tomato juice than any other fruit juice.

Now as to drugs, I was glad he brought out the gold salts. There are a great many of these patients who are fat, you cannot find their veins, may be the vein becomes obliterated. We find the gold salts especially of the salicylate group do exceedingly well in certain cases, but we don't know which type cases until we try it out. In cases it has done a great deal of good, but I would like especially for the doctor to advise me on how to correct some of these deformities in the patient before he came to us, and to alleviate the pain where we do not want to give opiates.

DR. JOHNSTON (closing): I want to thank the doctors for their discussions. I will try to answer Dr. Frizell's questions about ankylosis—trying to correct some of the deformities that have already occurred just prior to ankylosis. I have a case in mind of a girl 23 years of age that had ankylosis of both hips. She had been bed ridden for six or eight months and the extremities were in most unusable position, and she was almost lying perfectly straight; she could hardly void; she could not flex her knees because the legs were so close together. There was motion in the knees, and I felt if I could widen the angle between the legs she could get some use of her ankylosed joints. I put her to bed and put traction on both legs and gradually widened the points of traction. I used Russell's traction until I got the angle about twice as great as I thought I should, and then when the legs began to contract back a little they remained in a fairly normal position. The x-ray showed almost complete bony ankylosis, yet I was able under that condition to move those joints to some extent and she has now a very useful position.

About the morning pain. If you watch a patient with any type of arthritis sleep, you will find that they commonly flex most of their joints, they get into a most comfortable position, and it seems that that may have something to do with the morning pains; that when they do straighten out they have to overcome all of that flexion that has taken place during the night.

About the gold salts, they seem to be giving better results when given in the muscle. The workers along this line claim that it is not very wise to give it by mouth, that you get much better results if given in the muscle, and it is much easier than trying to find a vein.

Dr. Blake mentioned the colon. I probably did not emphasize that enough. It has been proven conclusively that the colon is a principle site of infection in arthritis and that a lot of cases will respond beautifully to the correction of constipation.

I thank you very much.

Prevention and Treatment of the Late Toxemias of Pregnancy*

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According to the American Committee on Maternal Welfare, eclampsia and allied forms of toxemia account for 30 per cent of the approximately 15,000 maternal deaths occurring annually in the United States. At least 100,000 women(2) each year have their pregnancies complicated by toxemias and recent reports of follow-up studies of large series indicate that many of the women who survive the acute toxemia or convulsions are partially incapacitated or have their life expectancy definitely shortened because of permanent vascular or renal injuries.

Herrick and illman(3) in a follow-up study of 594 cases of toxemias of pregnancy averaging 5.6 years since their toxemia found more than half of them revealing symptoms and signs within three years of hypertensive cardiovascular disease or latent or manifest primary glomerulonephritis. They concluded from this study that the pathologic changes characteristic of eclampsia, pre-eclampsia and other vascular types of toxemia are not transitory but in over 50 per cent of the cases are permanent, merging into those of chronic vascular disease as disclosed in the group coming to autopsy.

Any complication of pregnancy which accounts for one quarter of the high maternal mortality in this country and diminishes the life expectancy of women in the prime of life, in such a large percentage of cases, truly deserves our careful consideration.

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Much work is being done by different investigators on the etiology of the toxemias, but as yet no theory has been accepted. In the field of endocrinology G. V. and O. W. Smith(4) found excessive amounts of prolan and low levels of estrin, both of placental origin, in the blood and urine of toxemic women and suggested that the continued over production by the placenta to be probably a related factor and possibly causal in the etiology of late pregnancy toxemia and eclampsia.

Hoffman and Anselmino(5) claimed to have furnished evidence of excessive antidiuretic and pressor components of the posthypophyseal hormone in the blood of women suffering from eclampsia as well as histologic changes in the posterior lobe similar to those described by Cushing. These findings led them to believe that this hyperfunctioning of the hypophysis produces the disturbance seen in pregnancy toxemia and eclampsia. This work is very interesting and it is quite likely that along the endocrine line a cause will be found, but until then we clinicians must depend on a more practical line of therapy. The work that has influenced us most in recent years in our management of these cases was that of Arnold and Fay(6) published in the August, 1932, **Surgery, Gynecology and Obstetrics**. These authors reasoning from the cerebral edema or intracranial pressure theory of Zangemeister and physiological experiments on water intoxication by Rountree, brought out their prevention and control of eclampsia and allied conditions by means of fluid limitation and dehydration. We feel that this work has been the outstanding advance in the prevention and treatment of pregnancy toxemias published in recent years and should be thoroughly investigated by all who practice obstetrics. Arnold has dismissed the idea that eclampsia is due to a specific toxin and is strongly of the opinion that fluid imbalance or abnormal water retention is the only single factor, symptom or pathological finding invariably present in all cases of eclampsia.

Regardless of all known theories and the large amount of study and experimental work being done by trained investigators in our medical centers, the only known etiology of the toxemic state is pregnancy, present or recently passed, and the only sure cure of pregnancy toxemias is the removal of the fetus from the mother's body. As all toxemias are not equally severe and the great majority can be prevented by proper prenatal care and others are in reality cases of nephritis complicated by pregnancy, we feel there is a definite, but limited, place for medical treatment.

PROPHYLAXIS

The prevention of toxemias of pregnancy is the most important part of prenatal care. Prevention of the early manifestations of toxemia by proper cooperation between patient and physician and early termination of the pregnancy when the patient does not improve while under observation and treatment for early manifestations of the toxemic state, will prevent the more serious forms of toxemia and reduce the high mortality incident thereto. The physician who accepts obstetrical cases has indeed a serious responsibility and should be prepared to give adequate prenatal attention. Thorough history of previous illness and former pregnancies and complete physical examination at the first visit will often warn us to expect trouble. Evidence of kidney or vascular disease should be especially looked for. Foci of infection should be eliminated early. Nausea and vomiting of early pregnancy should be prevented or adequately treated as those who suffer with moderately severe vomiting during the early months show a marked increase in incidence of late pregnancy toxemia. Anemia during pregnancy should be discovered and treated. Although not considered as predisposing to the toxemic state it is frequently a complicating factor.

Observations of blood pressure, weight and urinalysis at intervals of two weeks during the last trimester are minimum requirements for the early recognition of toxemia. The physician neglects his patient if he fails to note and to attempt to control her overweight at each prenatal visit quite as much as though he failed to observe her blood pressure and urine. It has been shown that women who do not gain more than 20 to 22 pounds over and above their normal weight are rarely subject to the development of severe toxemia. There is nearly always a rise in both systolic and diastolic blood pressure several weeks before any subjective symptoms appear or before appreciable amounts of albumin appear in the urine.

TREATMENT

If a woman presents a rise of 10 to 15 points in blood pressure above the normal, or should the diastolic pressure rise to 90, or if there is a sudden excessive gain in weight above the normal, it should be recognized as evidence of approaching toxemia that demands immediate attention. She should be put to bed on low salt diet, fluids should be limited to 30 ounces in 24 hours and intake or output measured to determine her fluid balance. Dehydration is produced by daily doses of saturated solution of magnesium sulphate. This regime begun at the first signs of approaching toxemia will nearly always cause a reduction in blood pressure and loss of weight due to elimination of edema in the tissues. If this improvement occurs and symptoms do not recur while under treatment, the patient is allowed to continue to term under a careful fluid balance and bi-weekly examinations of blood pressure, weight and urine. Should signs and symptoms progress she is hospitalized on a more rigid regimen and, if improvement does not take place within four or five days, labor is induced by appropriate means.

The dangerously pre-eclamptic who, at the time of coming under observations has already advanced to a serious condition and is already on the verge of convulsive siezures is treated with more immediately effective measures. If headaches, substernal pain or blindness is complained of, immediate spinal drainage of 40 to 60 c.c. is done to relieve the intracranial pressure; 50 c.c. of 50 per cent glucose and 20 c.c. of 10 per cent magnesium sulphate is alternated intravenously at 2 and 4 hour intervals. Magnesium sulphate is given by mouth as soon as possible to unload the water that the intravenous hypertonic solutions have removed from the edematous brain and other tissues. Sedation is obtained by barbiturates. Fluids are withheld until the total output from kidneys and bowel show an effective degree of dehydration. The spinal drainage may be repeated in 6 to 8 hours if there is no improvement. Usually the patient is very much improved in 6 to 24 hours when a low salt diet is allowed. When it is evident that further improvement under treatment has ceased, the pregnancy is terminated in the interest of the mother. We feel that prolonged attempts at controlling these cases in an effort to carry them to term is more productive of chronic vascular or renal injury than the sudden and severe toxemia of short duration.

The eclamptic state differs from the severe pre-eclamptic only by the occurrence of severe convulsive siezures. The immediate indication is control of convulsions and each case should be individualized to suit the conditions present. The general principles of sedation and dehydration apply. When first seen ¼ to ½ grain of morphine is given and spinal drainage performed as soon as possible; 40 to 80 c.c. of spinal fluid is allowed to drain off slowly and is repeated in 3 to 6 hours as indicated; 50 c.c. of 50 per cent glucose is given intravenously alternating with 20 c.c. of 10 per cent magnesium sulphate until convulsions are controlled and ample dehydration of brain and tissues are obtained. Magnesium sulphate purgation is established early. Occasionally we have used sodium amytal intravenously and have found it a valuable aid in controlling convulsions. We do not employ sweating or venesection but would not hesitate to bleed a patient in the presence of edema of the lungs.

The nursing care of these patients is very important. A nurse should be in constant attendance and the utmost quiet should be observed. The patient must be kept warm and position changed often to prevent hypostatic pneumonia. The nose and mouth should be lower than the chest and suction used for aspiration of fluid in the presence of pulmonary edema. Oxygen is used after each convulsion, until breathing is normal and cyanosis has disappeared, and following control of convulsions, when sufficient dehydration has occurred, hypertonic glucose solutions, 300 c.c. of 25 to 30 per cent strength is given at eight hour intervals for it stimulates diuresis, combats acidosis and glycogen deficiency of the liver and draws fluid out of the tissues, thereby reducing intracranial pressure and cerebral edema.

After control of convulsions it is necessary to decide how pregnancy should be conducted in best interest of mother and fetus. We feel that it is safer for both of them if pregnancy is terminated. The method depends upon obstetrical indications.

We feel that induction of labor by rupture of membranes and allowing a large amount of amniotic fluid to escape is the most efficacious in the majority of cases. Where the cervix is long and the patient an elderly primipara and symptoms becoming rapidly more alarming in character we would not hesitate to terminate the pregnancy by abdominal section under spinal anesthesia. We never use a general anaesthetic in these toxic cases as we feel that it aggravates the existing lesions in liver and kidneys and predisposes to pneumonia.

In any case of eclampsia or pre-eclampsia the danger of convulsions does not cease after delivery. Sedation and fluid balance should be maintained until free diuresis occurs and the patient is out of danger. Blood pressure readings and output and intake should be routinely recorded; a low salt diet maintained until all edema has disappeared. If the blood pressure and urine does not return to normal within two weeks she should be treated for nephritis.

The mild toxemias. pre-eclampsia and eclamptic intoxication are almost solely attributable to an intoxication dependent upon pregnancy, while in nephritis in pregnancy the kidneys have already been injured and the renal reserve or margin of safety has been reduced by a previous infection, drug poisoning or previous pregnancy toxemia. While under normal conditions there appears no evidence of diminished kidney reserve, the increased stress of pregnancy induces kidney decompensation — objective and subjective symptoms appear early in pregnancy usually before the sixth month with insiduous onset. Hypertension, with marked rise of diastolic pressure and impairment of the renal functional reserve as measured by the renal concentration test, are characteristic. Symptoms persist after delivery and each succeeding pregnancy creates further renal injury and increased evidence of arteriosclerosis. Retinitis is a frequent finding. The fetal mortality is high due to early renal decompensation and vascular disturbances in the placenta. The immediate prognosis for the mother is relatively good but future prognosis is most grave. Early recognition and early termination of the pregnancy is essential if further exacerbation of the disease is to be avoided. Future pregnancies should be avoided through contraceptive advice or surgical sterilization. It is one of the tragedies of obstetrical practice that despite thorough warning some of these patients will refuse to permit any interference.

Since the opening of the new King's Daughters Hospital in January, 1927, we have observed and treated 104 cases of toxemia associated with the last trimester of pregnancy. Of these 48 were classed as mild toxemias with no maternal mortality. These we feel correspond to what is described in the literature as low reserve kidney, syndrome of renal fatigue or mild or moderate pre-eclamptic toxemia, and are usually easily corrected by diet, rest, efficient elimination and fluid balance control. They are likely to recur in succeeding pregnancies and it is believed by some observers that quite a large percentage will eventually develop vascular or renal pathology. All of these cases went into labor spontaneously or were induced by bag or rupture of membranes when they failed to improve under treatment. The fetal mortality was 6.25 per cent.

There were 14 severe pre-eclamptic cases with no maternal mortality, 21.4 per cent fetal mortality. Two were delivered by abdominal section, eight induced by bag or artificial rupture of the membranes. Four went into labor spontaneously.

There were 28 eclamptics or convulsive toxemias with three deaths, an uncorrected mortality of 10.7 per cent. One was a para II who gave a history of having toxemia with the first pregnancy, had no prenatal care and at 6½ months was found unconscious at home having one convulsion after another. She died of edema of the lungs twenty minutes after being admitted to the hospital and before anything could be done. The examination of the urine from the bladder after death revealed 20 ounces with only a trace of albumin.

The second death occurred 30 minutes after admission to the hospital. She had no prenatal care and diet suddenly, apparently of cerebral hemorrhage before an examination was made. Postmortem section produced a live and healthy baby.

The third case was an elderly multipara who was admitted in coma with history of no prenatal care and had been in coma for over 24 hours before she was sent to the hospital. There was complete anuria and marked elevation of blood urea and non-protein nitrogen. Death occurred three hours after admission to the hospital.

These three deaths probably could have been prevented had proper prenatal care been obtained in early pregnancy. The fetal mortality was 28.1 per cent.

The eleven sections in eclamptics were done before 1932, all under spinal anesthesia. At this time we felt that the immediate emptying of the uterus was indicated. Since 1932 we have attempted control of the convulsions by relief of intracranial pressure and induced labor by bag or artificial rupture of the membranes after the convulsions were controlled.

There were fourteen cases of chronic nephritis complicated by pregnancy with one death giving an uncorrected mortality of 7.1 per cent. She was a severe cardio-renal with cardiac decompensation and cellulitis of the jaw. She died of acute heart failure on getting out of bed seven days after emptying the uterus.

From our study of the literature and experience in prenatal care of approximately 1000 pregnant women and treatment of this small series reported and a smaller series at the colored King's Daughters Hospital during the last nine years, we are thoroughly convinced that:

(1) The incidence and mortality of severe toxemia can be materially reduced by adequate prenatal supervision.

(2) Toxemias that develop under proper prenatal supervision should be hospitalized early and positive measures instituted toward relieving cerebral edema and producing effective dehydration.

(3) When symptoms do not yield to conservative treatment the uterus must be emptied regardless of the period of gestation.

(4) Prolonged conservative treatment of mild and severe non-convulsive toxemia frequently results in permanent renal and vascular damage.

(5) While conservative measures for emptying the uterus are preferred abdominal sec-

tion is occasionally indicated

(6) General anesthesia should be avoided in any operative procedure.

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6. Arnold and Fay: "Eclampsia—Its Control by Fluid Limitation and Dehydration." Surg. Gyn. & Obst. Aug. 1932.

DISCUSSIONS

DR. MAXWELL E. LAPHAM (Philadelphia, Penn.): I want to say that I enjoyed Dr. Lucas' paper very much and I think it is one of the best presentations of the subject I have ever heard. There were several points brought out which are of great interest and should have impressed everyone. In the first place, Dr. Lucas mentioned one thing, which from a practical standpoint, is important and that is the fact that the prenatal care which has been given in the past has been directed toward detecting toxemic changes in pregnancy by doing an occasional urinary examination. I might say that the greater part of all prenatal care in the past has been simply the doing of a few urinary examinations. We know that toxemia can often be detected before there are any urinary changes, noted by edema, gain in weight and a progressive hypertension. The habit many of us have had of just examining the urine is a pernicious one, because we thereby often do not anticipate the proximity of toxemia by several weeks which could have been determined if the patient had been examined.

The second point that interested me very much was the reference to Arnold and Fay's treatment for severe eclampsia. I think some of us might get the idea that in all cases of eclampsia and severe pre-eclampsia we might be justified in doing a lumbar puncture. I am constantly asked by physicians what they can do in the home to treat a patient in eclamptic convulsions. Just the other day a doctor said to me, "You see I had a patient with convulsions at home fifteen miles in the country and there was nothing I could do for her." There are many things we can do for an eclamptic in the home in an emergency. However, it is perfectly obvious that we would prefer having such a patient in a hospital, where she can be much better treated. I do not believe that we should get the idea that an eclamptic patient should always have a lumbar puncture whether she is in the home or in a hospital. It is a radical procedure and one which only a trained man would feel justified in resorting to. In the home there are other phases of Arnold and Fay's treatment which can be done, although I am not criticizing occasional lumbar puncture when indicated if it is done by trained hands. They suggested the control of water balance by using hypertonic solutions intravenously and this can be done in the home, by using glucose or perhaps magnesum sulphate. The measuring of the intake against the output is important also. Giving magnesium sulphate by mouth also has some effect on the water balance. These things can all be done in the home.

The third point I want especially to stress is the length of treatment. Dr. Lucas mentioned the fact that if these patients do not respond to treatment they should have their pregnancies interrupted. Many people have the idea that one can go on treating the mild cases of toxemia without harm to the patients but I believe the longer they are treated without marked improvement the more permanent damage there is done. If after a few days' trial of treatment in the severe pre-eclamptics and a slightly longer period in the milder cases they do not respond or get worse, then, no matter what period of gestation we are dealing with the pregnancy ought to be terminated.

Again, I want to thank Dr. Lucas for this paper and for the opportunity of discussing it.

Dr. R. A. Street (Vicksburg): First I would like to say I have enjoyed this paper. I think he has covered the subject about as thoroughly as it could be given. There are one or two points that he did not stress quite enough. While I was in Chicago taking a little postgraduate work in obstetrics, I was rather surprised to notice that they gave rather large amounts of hypertonic glucose solution, not 50 to 150 c.c. of glucose in these cases of eclampsia or threatened eclampsia, but as much as 1500 c.c. in spite of the fact that the patient in some cases did have edema of the lungs. Apparently it does no harm to give these patients large amounts of 20 per cent glucose solution, and it certainly does help them. I don't think there is any question about that.

The other point which he brought out so

well is the method of induction, that is, by rupture of the membranes. Of course, one would not care to use any oxytocics in toxemias. We have used this method of induction of labor not only in preeclampsia but on other indications, at the Vicksburg Sanitarium, with very successful results. We have not had any trouble at all with the babies or with the mothers. The only other factor he brought out which I would like to stress was that it is better for the mother not to have a baby than to die and leave the baby an orphan, that is, do not put too much stress on the baby in threatened eclampsia, regardless of the period of gestation, because it won't do you any good if the mother dies because you prolong it too long. I want to thank Dr. Lucas.

DR. M. M. SNELLING (Gulfport): There is only one thing that I want to mention. I enjoyed this paper a great deal. With reference to treating the patients in the homes, I think it was brought out but passed over quickly, but it is a mighty good thing for the general practitioner to keep in mind, get twenty-four hour specimens on the patient and see what their urinary output is at frequent intervals.

DR. W. L. WILLIAMSON (Memphis, Tenn): I did not come down to make a speech, or to discuss papers. I enjoyed Dr. Lucas' paper very much. I think it was a very valuable paper. I came down to see my old friends. I have more friends in Mississippi than I have in Tennessee, and I am always glad to come down here and see them and spend a few hours with them. I just came down to mix with you and bring greetings from the Tennessee State Medical Association to the Mississippi State Medical Association. I thank you for this courtesy.

DR. LUCAS (closing): I want to thank the doctors very much for their discussion of my paper. I take this opportunity again to thank Dr. Lapham in behalf of the local doctors for his excellent lectures in this vicinity last summer, and also want to say that we are mighty glad to have Dr. Williansom with us at this time.

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Manuscripts and all material for publication should be addressed to the editor, P. O. Box 303, Vicksburg, Mississippi.

EDITORIALS

MEDICAL SOCIETY OPERATES CHARITY OUT-PATIENT CLINIC

For the past several years an out-patient clinic had been conducted at the Mississippi State Charity Hospital at Vicksburg. The hospital was not required by law to operate this clinic: it was the outgrowth of the custom of discharging patients from the hospital as soon as they became ambulatory and allowing them to return for dressings. During the depression, there was so much need that many patients went to the hospital seeking admission. if they could be treated in the out-patient clinic, they were not admitted but were allowed to return for regular treatments. The previous superintendent reported 5,600 patients treated in the out-patient clinic during the year ending June 30, 1935. With it's meager appropriation the hospital could not afford to furnish adequate treatment for this group. The superintendent of the hospital, together with the secretary of the Mississippi State Hospital Association, devised the following plan:

The clinic would be operated by the Issaquena-Sharkey-Warren Counties Medical Society. A social worker should be employed, whose chief duty would be to investigate all applicants to determine if they were charity patients. She would also keep the necessary records, etc. Each patient would be charged 25 cents registration fee for each visit, and a charge of not more than $1.00 would be made for the administration of neo-salvarsan, or other expensive drugs. If the social worker's investigation revealed that the patient could not afford this fee, he would be treated gratis. The funds realized from fees would be used to pay the social worker's salary, to furnish the necessary drugs, dressings, etc., and any excess would be used for the purchase of better equipment for the clinic.

This plan has the advantage of having a charity clinic under the direction of the medical society where charity patients—and only charity patients—are treated. Every doctor has a few patients that are absolutely charity patients, whom he has been treating in his office at his expense. He can now refer these cases to this clinic, thereby conserving his supplies and time.

To inaugurate this plan, it was necessary to get the approval of the State Board of Trustees for Eleemosynary Institutions and the medical society. This board of trustees is composed of five business men, two of whom are physicians, who immediately stated that they thought the plan was a splendid one, but it would be necessary to get the approval of the State Attorney General. This matter was immediately taken up with the Attorney General, who approved it. It was then submitted to the medical society, which showed its approval of the plan by unanimously adopting it and electing the superintendent of the hospital as director. The members of the attending staff of the hospital agreed to spend one hour each week at the clinic. Of course, the chief surgeon, the house surgeon and house physician are in attendance each afternoon, the clinic being conducted three afternoons a week. It was necessary to make some alterations, obtain some extra equipment and obtain a competent social worker. The clinic was opened June 29 and has been operating in a satisfactory manner.

As evidence of confidence in this plan, the Public Health Service, thru the Warren County Health Department, has appropriated to the clinic the sum of $500 for the next twelve months. This sum can be used in defraying the salary of the social worker and in providing necessary equipment, drugs and supplies in the treatment of venereal diseases. No strings were attached, except a request that a monthly and quarterly report of number of venereal cases treated be rendered to the Public Health Service.

E. H. J.

DUTY ON SURGICAL INSTRUMENTS

Under order of the Commissioner of Customs, approved by the Secretary of the treasury, there has been a countervailing duty placed on a number of German products, included in which are surgical instruments. A countervailing duty is one that is placed upon the products of any one particular country in addition to the regular duty to meet what is considered as discrimatory action on the part of the country involved, such as the giving of bounties or grants by the government to the manufacturers of these articles when exported. The purpose of these bounties or grants is to permit the manufacturers of these products to export them at a sales price below the cost of manufacture.

The United States Government considers that in order to protect the United States industry a countervailing duty should be placed on such products to compensate for the bounties or grants being bestowed by the foreign government.

The countervailing duty placed on surgical instruments by Treasury Department Order No. 48360 amounts to 50 per cent, which is in addition to the prevailing general duty of 55 per cent; this, however, becomes 70 per cent if the major value of the article being imported is glass. The effect upon the importation of German surgical instruments will be that of an additional 56 per cent duty. The 56 per cent is an estimated duty which will be held as a deposit until the actual value of the bounty or grant has been determined.

The tax became effective July 11, 1936.

(From Legislative Bulletin No. 48, of the American Hospital Association).

OUR OWN ESSAYISTS

The average doctor would rather be informed than entertained by the program of his county medical society, provided the information is presented with a freshness and variety which will be stimulating.

This is the reason why the average member will say that the best programs are those presented by the members of his own society.

Papers presented by "amateur" speakers are usually good because they are so natural, no matter if the diction is not quite equal to the polish of an experienced lecturer.

We all know how to say something when we have something to say. The old excuse "I can't make a speech" is really untrue.

We would all get tired quickly of whipped cream and long for some good old fashioned meat in our mental diet. Don't think you need the skill of an orator if you are asked to present a paper or lead a discussion. Just have something to say, and say it.

Nobody ever becomes a nervous wreck while he is succeeding, no matter how hard he works. He goes by the board only when the tide turns against him or when he stops work to have a good time.—*The Pinion, Australia.*

DIRECTORY AND CALENDAR OF MEDICAL SOCIETIES

Information is not complete. Secretaries of societies are urged to send in full data so that it may be known when the societies of the state meet; also the names of the officers directing their activities this year should be known.

MISSISSIPPI STATE MEDICAL ASSOCIATION: Seventieth Annual Session and Thirty-fourth Annual Session of the House of Delegates, Meridian, May 11, 12, and 13, 1937.

Adams County Medical Society: W. K. Stowers, Natchez, president; F. S. Dixon, Natchez, secretary. Meets third Tuesday each month, Natchez, 7:30 p. m.

Amite County Medical Society: D. H. Thornhill, Crosby, secretary.

Central Medical Society: E. L. Walker, Magee, president; L. W. Long, Jackson, secretary. Meets third Tuesday each month, Robert E. Lee Hotel Roof, Jackson, 7:00 p. m. Except July and August.

Claiborne County Medical Society: E. P. Jones, Hermanville, president; G. W. Acker, Port Gibson, secretary.

Clarksdale and Six Counties Medical Society: D. O. Pierce, Jonestown, president; N. C. Knight, Clarksdale, secretary. Meets fourth Wednesday of March and second Wednesday of November, Elks Club, Clarksdale, 2 p. m.

Clarke-Wayne Counties Medical Society: W. P. Gray, Waynesboro, president; Albert Hand, Shubuta, secretary.

Coahoma County Medical Society: J. A. Slack, Friars Point, president; N. C. Knight, Clarksdale, secretary. Meets second Wednesday each month, Clarksdale Hospital, Clarksdale, 1:30 p. m.

Delta Medical Society: J. W. Lucas, Moorhead, president; F. M. Acree, Greenville, secretary. Meets second Wednesday of April and October. Rotates through five counties, 2 p. m.

DeSoto County Medical Society: J. M. Wright, Hernando, president; L. L. Minor, Rt. 4., Memphis, secretary. Meets first Monday of January, April, July, October, Hernando, 10 a. m.

East Mississippi Medical Society: C. H. Gully, DeKalb, president; T. L. Bennett, Meridian, secretary.

Franklin County Medical Society: L. Costley, Meadville, secretary.

Hancock County Medical Society: A. P. Smith, Bay St. Louis, secretary.

Homochitto Valley Medical Society: Lucien S. Gaudet, Natchez, president; W. K. Stowers, Natchez, secretary. Meets January, April, July and October, 2:00 p. m.

Issaquena-Sharkey-Warren Counties Medical Society: T. P. Sparks, Jr., Vicksburg, president; Leon S. Lippincott, Vicksburg, secretary. Meets second Tuesday each month, Mississippi State Charity Hospital, Vicksburg.

Jackson County Medical Society: W. J. Weatherford, Pascagoula, president; R. G. Lander, Pascagoula, secretary. Meets second Thursday of March, June, September and December, Jackson County Hospital, Pascagoula, 7 p. m.

Jefferson County Medical Society: W. T. Harper, Fayette, secretary.

Newton County Medical Society: W. T. Pennington, Decatur, president; Dudley Stennis, Newton, Secretary.

North Mississippi Medical Society: R. G. Grant, Holly Springs, president; A. H. Little, Oxford, Secretary.

Northeast Mississippi Thirteen Counties Medical Society: Z. A. Dorsey, Troy, president; A. J. Stacy, Tupelo, secretary. Meets third Tuesday, March, June, September and December. Next meeting at Amory.

Pike County Medical Society: J. L. Bauer, McComb, president; Elise Rutledge, McComb, secretary. Meets first Thursday each month, McComb, 6:30 p. m.

Pontotoc County Medical Society: L. O. Carruth, Tupelo, R.F.D., president; O. F. Carr, Pontotoc, secretary. Meets first Tuesday each month, Pontotoc.

South Mississippi Medical Society: J. P. Culpepper, Hattiesburg, president; Carlton Temple, Hattiesburg, secretary.

Stone County Medical Society: Earl W. Green, Wiggins, secretary. Meets with Harrison-Stone-Hancock Counties Medical Society.

Tate County Medical Society: W. D. Smith, Senatobia, president; J. Sidney Eason, Coldwater, secretary. Meets second Wednesday each month, Senatobia.

Tri-County Medical Society: B. L. Crawford, Tylertown, president; R. B. Zeller, Hazlehurst, secretary. Meets second Tuesday of March, Copiah-Lincoln Junior College, Wesson; June, Walthal Hotel, Tylertown; September, Riverside Hotel, Monticello; December, Whitworth College, Brookhaven, 12:30 p. m.

Wilkinson County Medical Society: E. M. Butler, Centreville, secretary.

Winona District Medical Society: P. B. Brumby, Lexington, secretary.

MISSISSIPPI HOSPITALS—CALENDAR OF STAFF MEETINGS

MISSISSIPPI STATE HOSPITAL ASSOCIATION: Eighth Annual Session, Meridian, May 10, 1937.

Anderson Infirmary: Second Friday, each month, 6:00 p. m.

Biloxi Hospital: First Friday, each month, 7:30 p. m.

Clarksdale Hospital: Second Wednesday, each month, 1:30 p. m.

George C. Hixon Memorial Hospital: First Monday, each month.

Greenwood Leflore Hospital: Second Monday, each month, 8:00 p. m.

Houston Hospital: Last Thursday, each month.

Jackson County Hospital: Second Thursday, each month except July and August, 7:00 p. m.

Jackson Infirmary: Last Tuesday, each month, 6 p. m.

Meridian Sanitarium: Second Thursday, each month, 6:30 p. m.

Mississippi Baptist Hospital: Third Tuesday, each month, 6:30 p. m.

Natchez Sanatorium: Second Tuesday, each month 7:30 p. m.

Northeast Mississippi Hospital: First Monday, each month, 7:30 p. m.

Rush's Infirmary: Second Thursday, each month, 7:00 p. m.

South Mississippi Infirmary: Last Thursday, each month, 5:00 p. m.

U. S. Veterans Hospital, Gulfport: Every Monday, Tuesday, Wednesday, and Thursday, 10:45 a. m.

Vicksburg Hospital: Second Thursday, each month 7:00 p. m.

Vicksburg Infirmary: First Wednesday, each month, 7:00 p. m.

Vicksburg Sanitarium: Tenth or week of tenth each month, 6:30 p. m.

Winona Infirmary: First Thursday, each month, 7:30 p. m.

MISSISSIPPI STATE PEDIATRIC SOCIETY

The Mississippi State Pediatric Society met at the Robert E. Lee Hotel, Jackson, at 7 p. m., July 2, in a called meeting, for the purpose of electing officers for the year and discussing the proposed pediatric lectures, similar to those that have been conducted by Dr. Lapham, in obstetrics.

The Mississippi State Pediatric Society heartily endorsed the plan of beginning the course in pediatrics this summer.

Dr. Robert Strong, professor of pediatrics, Tulane University, was selected to conduct the course, which will begin, at Clarksdale, Monday, July 6, and will continue for five days. The next place has not been selected as yet. This course in pediatrics is fostered by the Mississippi State Pediatric Society, the Mississippi State Medical Association, and the Mississippi State Board of Health. Every physician in reach of these lectures should by all means attend them.

The following officers of the Mississippi State Pediatric Society were elected for the year 1936-37: Dr. Harvey F. Garrison, Jackson, president; Dr. John Bullock, Jackson, vice-president, and Dr. Guy C. Jarratt, Vicksburg, (re-elected) secretary and treasurer.

The next meeting of the Mississippi State Pediatric Society will be held the afternoon and night before the Mississippi State Medical Association meeting at Meridian, in May, 1937, at which time, an outstanding program is contemplated.

HARVEY F. GARRISON, JR.

Jackson, July 3, 1936.

NEW SOCIETIES

The Council of the Mississippi State Medical Association at the Greenville meeting approved the following applications for charters:

GEORGE COUNTY: Dr. R. F. Ratliff, Lucedale, president; Dr. J. L. Spiceland, secretary.

JEFFERSON DAVIS COUNTY: Dr. H. G. Williams, Prentiss, president; Dr. V. N. Nichols, Carson, vice-president; Dr. G. C. Terrell, Prentiss, secretary-treasurer; Dr. W. S Berry, Prentiss, member of Medico-Legal Committee.

HOLMES COUNTY: Dr. R. C. Elmore, Durant, president; Dr. C. J. Vaughn, Lexington, secretary and treasurer.

JONES COUNTY: Dr. A. J. Carter, Ellisville, president; Dr. J. B. Jarvis, Laurel, vice-president; Dr. Eugene A. Bush, Laurel, secretary and treasurer.

WAYNE COUNTY: Dr. W. P. Gray, Waynesboro, president; Dr. J. C. Rush, Waynesboro, vice-president; Dr. R. B. Davis, secretary and treasurer.

POSTGRADUATE COURSES IN OBSTETRICS

Postgraduate courses in obstetrics continue under the direction of the Committee on Postgraduate Medical Education and sponsored by the Mississippi State Medical Association, the Mississippi State Board of Health, Tulane University Graduate School of Medicine, Tulane University School of Medicine, and the Mississippi State Hospital Association.

Beginning June 22, ten lectures and clinics were given in the Holmes County Health Department. A cordial invitation was extended to every physician in Holmes County and near-by vicinities to attend.

Beginning the week of July 6, ten lectures and clinics were given as follows: Mondays at Aberdeen; Tuesdays at Columbus; Wednesdays at Starkville; Thursdays at Louisville; and Fridays at Kosciusko.

Local committees were as follows:

Aberdeen—Drs. C. H. Love, C. E. Boyd, L. W. Darracott, C. B. McCown, and A. I. Boozer.

Columbus—Drs. C. E. Lehmberg, A. E. Brown, and W. L. Stallworth.

Starkville—Drs. F. E. Barr, H. L. Scales, F. B. Long, and J. F. Eckford, Jr.

Louisville—Drs. E. L. Richardson, S. W. Pearson, and H. B. Watkins.

Kosciusko—Drs. C. A. Pender, R. B. Ray, S. L. Bailey, Aaron Barnes, and J. W. Long.

Dr. Maxwell E. Lapham, of Philadelphia, Penn., is the field clinician presenting these courses.

Over 400 physicians have thus far participated in this educational undertaking. Attendance has averaged higher than 80 per cent.

POSTGRADUATE LECTURES IN PEDIATRICS

Postgraduate lectures in pediatrics, sponsored by the Mississippi State Medical Association and approved by the Mississippi State Pediatric Society were begun at Clarksdale, July 6. The lectures were conducted by Dr. Robert A. Strong, professor of pediatrics, Tulane University, New Orleans. Meetings were held every day, Monday through Friday, for one week. The subjects of the lectures were.

1. *The New Born*—Physical examination (motion pictures); care of the new born; diseases of the new born.

2. *The Nutritional Requirements in Infancy*—Physiology of digestion; vitamins; breast feeding; artificial feeding; artificial diet materials (motion pictures); stools in infancy.

3. *Nutritional Diseases of Infancy and Childhood*—Rickets; scurvy; pellagra; infantile atrophy; diarrheas of early life.

4. *The Immunizations*—Diphtheria (age, toxin-antitoxin, anatoxin, alum precipitated toxoid, Schick test); scarlet fever; typhoid fever; pertussis (Sauer vaccine, Krueger's pertussis U. B. A.); smallpox (multiple puncture, intradermal); acute anterior poliomyelitis (Kolmer vaccine, Park and Brodie vaccine): measles (convalescent serum, whole blood); tetanus.

5. *Most Frequent Cause of Vomiting in Infancy (motion pictures and slides)*—Overdistension of stomach by swallowed air, too frequent feeding, too large volumes of food, unsuitable composition of food, parenteral infections, habit or nervous vomiting (rumination), gastro-enterospasm, pyloric stenosis, congenital deformities of the gastro-intestinal tract and miscellaneous abdominal conditions, dehydration, anhydremia and inanition, intracranial conditions, toxic states.

Similar lectures were given in Natchez the week of July 13.

It is planned to have the lectures in pediatrics given in other parts of the state

MISSISSIPPI STATE BOARD OF HEALTH

Dr. Ransom J. Jones has been selected as director of the Pearl River County Health Department. Dr. Jones has just finished a three months' course of study in public health at Vanderbilt. He is a graduate of the Emory University Medical School and served an internship at U. S. Marine Hospital. The other personnel of the Pearl River County Health Department are two public health nurses, a sanitation supervisor, a laboratory technician, and office clerk.

On July 15, the Madison County Health Department will be organized with Dr. C. C. Smith in charge. There will also be two public health nurses, one sanitation supervisor, and an office clerk. Dr. Smith has just returned from Johns Hopkins University where he earned his certificate of Public Health. He is a graduate of Emory University and served a hospital internship at the Georgia Baptist Hospital in Atlanta.

The organization of this department at Canton brings the total number of full-time county health departments to twenty-seven.

Dr. Mark F. Boyd, director of malaria control in Mississippi from 1928 through 1932, was a recent visitor in the offices of the State Board of Health. Dr. Boyd is director of malaria field studies and research for the Rockefeller Foundation, stationed at Tallahassee, Florida.

The Commonwealth Fund has just announced the award of scholarships for four months' study at Vanderbilt University for the following public health nurses, beginning during September: Mrs. Verna Clark, R.N., Warren County; Miss Selma Rhodes, R.N., Pike County; Mrs. Alice Gilliam. R.N., Holmes County.

Scholarship for several weeks study and observation in New York was also granted to Mrs. Mary F. Speed, R.N., public health nurse in Lauderdale County.

Women WPA workers in the Vital Statistics Office have searched the birth records from November, 1912, through the year 1927, and have listed all children whose names do not appear on the birth certificates. During these years approximately one birth certificate out of five does not contain the name of the child, and some of these children are now nearly twenty-four years of age. The family names have all been arranged alphabetically by counties. Lists are being made and sent to each county concerned, and newspapers are requested in such counties to give publicity so that the parents or any of the family may send in the name of any child where the name was never entered on the certificate. In some instances the same couple have as many as six children born during the fifteen years period without names on the certificates.

The Sanitation Division of the State Board of Health reports that through the WPA during the period of October 21, 1935 to July 6, 1936, the total number of 15,164 sanitary pit toilets have been constructed in Mississippi. Since December, 1933 and through April of this year, under the cooperation of the FERA, the CWA, and WPA, 36,168 sanitary pit toilets have been built. Ninety-five per cent are the concrete riser type.

On June 15 and 16, Drs. Frank Walker and Clarence L. Scamman, of the Commonweath Fund, were in Mississippi to confer with state health and local officials about selecting a third county in Mississippi for the cooperation of the Fund. Pike and Lauderdale Counties now have super health units with the generous support, financial and otherwise, of the Commonwealth Fund. Jones and Lowndes Counties are now being considered and one soon will be selected.

After August 1, 1936 no certificates for births occurring more than two years ago can be accepted. This ruling preventing filing of delayed birth certificates is an added reason why all should check carefully to see that each birth attended is promptly registered. Birth certificates are being required for numerous occasions, and their use is becoming increasingly frequent and necessary.

FELIX J. UNDERWOOD,
Executive Officer.

Jackson, July 14, 1936.

AMITE AND WILKINSON COUNTIES MEDICAL SOCIETIES

The Amite and Wilkinson Counties Medical Societies held join meetings at the Field Memorial Hospital, Centreville, in May and in June. We are having good attendance and much interest is manifested at these meetings. Each county scoiety holds its business session separately and then enjoys a combined program. Since both counties have a very small membership and some of those are always providentially hindered the combined meeting ensures enough present at all times to make the meeting worth while.

At the May meeting a very interesting case report was presented by Dr. E. M. Robards, Jackson, La. Another interesting case report was presented by Dr. Edwin Butler, Centreville. Both papers were discussed generally. Dr. Sam Field, Centreville, presented and discussed some interesting x-ray pictures of recent cases at the Field Memorial Hospital.

At the June meeting we had no regular program but rather gave way to a general round table discussion of recent cases and problems. The members entered into this, each one expressing an opinion as regards results with certain methods of therapy that have proven tried and true in their practice. This type of meeting is very stimulating and many practical points of merit are swapped.

Both of these meetings were preceded by splendid banquets.

A rather extensive program of immunization against diphtheria is being carried out by Dr. Catchings of Wilkinson County and Dr. Stewart of Amite County.

In July the entire Homochitto Valley Medical Society will meet at Centreville for luncheon and program. The speakers will probably be Dr. I. M. Gage, associate professor of surgery at Tulane, and Dr. S. Chaille Jamison, professor of clinical medicine at Tulane.

D. H. THORNHILL, Secretary
Amite County Medical Society.

Crosby, July 3, 1936.

CENTRAL MEDICAL SOCIETY

At the June meeting of the Central Medical Society, we were very pleased to have on his first official visit to any medical society, our president-elect, Dr. W. L. Little, Wesson.

Dr. Otis Warr, Memphis, Tenn., gave a most interesting paper on "Circulatory Failure Versus Cardiac Failure."

The Central Medical Society will not meet again until the first Tuesday in September, since the "boys" are rather lazy in hot weather.

HARVEY F. GARRISON, JR.

Jackson. July 3, 1936.

ISSAQUENA-SHARKEY-WARREN COUNTIES MEDICAL SOCIETY

A regular monthly meeting of the Issaquena-Sharkey-Warren Counties Medical Society was held at the Mississippi State Charity Hospital, Vicksburg, Tuesday, July 14, and after a supper served at 7:30 p. m., was called to order by the president, Dr. T. P. Sparks, Jr., with 20 members and 10 guests present.

Papers and discussions—UROLOGY—Dr. B. B. Martin, Jr., chairman.

1. Some Remarks on Renal Lithiasis.—Dr. T. P. Sparks, Jr., Vicksburg. Discussed by Drs. B. B. Martin. Jr., A. Street, W. A. Smith, and P. S. Herring. Dr. Sparks closed.

2. A Review of Some Interesting Urological Conditions.—Dr. Cummings H. McCall, Gulfport, exchange essayist from the Harrison-Stone-Hancock Counties Medical Society. Discussed by Drs. T. P. Sparks, Jr., A. Street, W. A. Smith, and B. B. Martin, Jr. Dr. McCall closed.

3. Polycystic Disease of the Kidney.—Dr. A. Street, Vicksburg. Discussed by Drs. C. H. McCall, and B. B. Martin, Jr., Dr. Street closed.

Dr. Nathan B. Lewis, Vicksburg, chief surgeon of the staff of the Charity Hospital, presented a case report—Anthrax. This was discussed by Drs. A. Street and Herring.

Dr. F. Michael Smith, Vicksburg, presented a letter written by direction of the Society to the Woman's Auxiliary to this Society in appreciation of "Doctor's Day" and it was ordered sent. The letter follows:

Vicksburg, Miss., July 14, 1936

To the Members of the Woman's Auxiliary of the Issaquena-Sharkey-Warren Counties Medical Society, Vicksburg, Miss.

Dearest Ladies:

At the June meeting of the Issaquena-Sharkey-Warren Counties Medical Society, some member asked if the ladies of the auxiliary had been given an official written expression of the appreciation of the society for the marvelous entertainment on "Doctor's Day," a day they inaugurated for us. The society was advised that on that occasion (Doctors' Day) a most profuse verbal expression of appreciation was given by every doctor present, nevertheless, some man. some naughty man,

"A child or man, whose life is a span
Protracted with sorrow from day to day,
Naked and featherless, feeble and querulous,
Sickly, calamatous, creature of clay,

moved that I write you a voluminous letter expressing in superlative terms our evaluation of the uniqueness of the occasion and the resplendent hospitality of our charming hostesses and that I set to music those amorous expressions of appreciation that would well from our hearts as dulcet music from the harp of Orpheus.

Such a task we cannot justly perform. We might quote from the poet.

"And say without our hopes, without our fears
Without the wife that plighted love endears
Without the smile from gorgeous beauty won
Oh! What were man?—Only a world without a sun'

But should we attempt such a symphony, such a poetic expression, we suspect you would justly say,

"If unprejudiced we you scan
The going of this clock-work, called man,
We will find a hundred movements made
By no devices in his head;
But 'tis his stomach's solid stroke
That tells his praises are but a joke."

You would by intuition know that it was the bounteous meal you served us that these gormandizing doctors wanted to rave about and "quit themselves like men." Nevertheless, knowing that you know better what we think than we can express by what we say, still, dear girls of the auxiliary, we feel an anonymous writer has expressed our deeper thoughts best when he wrote of woman thus:

"Oh, the gladness of their gladness, when they're glad,
And the sadness of their sadness, when they're sad;
But the gladness of their gladness, and the sadness of their sadness,
Are as nothing to their badness when they're bad.

* * *

Oh! the shrewdness of their shrewdness, when they're shrewd
And the rudeness of their rudeness, when they're rude,
But the shrewdness of their shrewdness, and the rudeness of their rudeness,
Are as nothing to *their goodness* when they're good."

And never were you better or nobler in the sphere of a doctor's life, in the happy relationship of his devoted and sympathetic wife, than when you conceived the idea of a Doctor's Day; refreshments, wholesome entertainment, and congenial associations that caused him to forget the "cares that infest the day" and may these expressions at random spoken be to you an infallible token of our inexpressible appreciation.

Yours most truly
F. Michael Smith, M. D.
Delegated Scribe

Dr. E. H. Jones, Vicksburg, Director of the clinic, conducted at the Mississippi State Charity Hospital by this society, made a report.

The following were unanimously elected to membership in the society:

Dr. Volney Richardson Liddell, Vicksburg; Dr. Alston Callahan, Vicksburg.

The Society voted to ask the Woman's Auxiliary to this Society to organize an auxiliary to the Mississippi Charity Hospital.

The Society voted to endorse the efforts of Dr. F. Michael Smith, Director of the Warren County Health Department, to prevent poliomyelitis in this community.

The next meeting of this society will be held at the Mississippi State Charity Hospital, August 11, at 7 p. m. the subject will be General Practice and the committee in charge consists of Drs. E. B. Stribling, chairman, J. B. Benton, G. W. Gaines, H. H. Haralson, W. A. Smith, H. B. Wilson and W. E. Johnston. The program will be as follows:

1. Pyelitis in Children.—Dr. C. L. Simmons, Hazlehurst, exchange essayist from the Tri-County Medical Society.

2. Painful Breast.—Dr. M. Q. Ewing, Amory, exchange essayist from the Northeast Mississippi Thirteen Counties Medical Society.

3. Experiences in Obstetrics In General Practice.—Dr. W. A. Smith, Panther Burn.

4. Case Report by the staff of the Mississippi State Charity Hospital.

NORTH MISSISSIPPI MEDICAL SOCIETY

A quarterly meeting of the North Mississippi Medical Society was held at the Alibi Club, Como, July 15, beginning at 3 p. m. The program, as announced by the secretary, Dr. A. H. Little, Oxford, was as follows:

1. Invocation.—Rev. P. N. Brincefield, Como.

2. Minutes of preceding meeting and other business..

3. "Coronary Thrombosis."—Dr. D. R. Moore, Byhalia. General Discussion.

5. "Pregnancy Complications of the Third Trimester."—Dr. William W. Walker, Memphis, Tenn. General discussion.

Dr. R. G. Grant, Holly Springs, president, presided.

CLARKE COUNTY

Clarke County has put in a very successful campaign during the month of June against diphtheria under the supervision of Dr. W. C. Norris, county health officer, with the aid of the nurse, Miss Ashworth. I understand that more than eight hundred children were immunized. Many people also received immunizations against typhoid fever. This is a valuable work that is being done by Dr. Norris and Miss Ashworth.

Dr. H. C. Watkins, Jr., who has just finished his medical course at Vanderbilt University Medical School, spent about two weeks at home leaving for Charleston, South Carolina, where he will serve an internship. We wish for Dr. Watkins a very pleasant and profitable stay in that city.

We understand that Dr. Houston Moore, who recently left Clarke County for New Orleans to specialize in eye, ear, nose and throat work is well pleased with his work there. Dr. Moore is highly respected as a gentleman and as a physician. The people of Clarke County regret to lose his services but wish for him every success in the specialty that he has chosen.

We are pleased to learn that the contracts have been awarded for the construction of some better highways in Clarke County. It is a relief to a physician to realize that some of his traveling can be done on real highways instead of lanes, cutoffs and byways. In the near future Clarke County will get about twenty-eight or thirty miles of newly constructed highways. That means a reduction in depreciation on a car and a saving in gasoline.

G. E. GODMAN, County Editor
Quitman, July 3, 1936.

COAHOMA COUNTY

Drs. E. LeRoy Wilkins. J. A. Slack, and others from our county attended the state convention of the American Legion at Greenville during May—at least they say that someone said they were there and had a big time.

Dr. S. D. Robinson and family and relatives enjoyed a fishing and swimming party at Moon Lake for a couple of days.

We are mighty glad to report that Dr. T. M. Dye is progressing rapidly in his recovery. He is up and around with us now and it is mighty good to have him back with us again. We know all his good friends will be glad to know this, throughout the state. He is planning to go to Dawson Springs for three or four weeks the first of July.

Visitors to the Coahoma County Health Department during the month were Dr. J. A. Milne, Miss Ora E. Phillips, Miss Jessie Lynn Ruff, Messrs. Ed. Johnston, Floyd Ratliff, Clyde Copeland, H. A. Kroeze, Nelson H. Rector, C. M. Brock, all of the State Board of Health, also Dr. L. A. Barnett, of Greenwood. Although it is hot and getting hotter the county health unit continues to function at top-notch speed, reducing gradually and day by day the incidence of preventable diseases. This work is most worth while and we are mighty glad to see it going on and progressing.

Mrs. S. L. Knight, mother of Dr. N. C. Knight, was a visitor in Dr. Knight's home in Clarksdale during the month. Mrs. Knight is from Mendenhall where Dr. N. C. Knight's father is engaged in the active practice of medicine.

N C.. KNIGHT, County Editor
Clarksdale, June 30, 1936.

DESOTO COUNTY

Some excerpts from June issue of *The Mississippi Doctor:*

Dr. Harvey F. Garrison of Jackson, president-elect, was installed as president. Long experience as a leader in organized medicine will prove most valuable to the Association. (L. S. Lippincott).

A very pleasing and gracious thing was the election of Dr. W. L. Little to be president-elect. Dr. Little has been a most faithful and consistent worker for the association for many years. (G. S. Bryan).

For fourteen years his name was synonymous with public health advancement in Mississippi. (President J. R. Hill in re. Dr. W. S. Leathers).

Dr. W. H. Frizell, Brookhaven, and Dr. Dan J. Williams, Gulfport, because of outstanding efficiency and results obtained in office, were continued as councilors of the eighth and ninth districts respectively. (L. S. Lippincott).

Dr. Hugh A. Gamble, Greenville, and Dr. Felix J. Underwood, Jackson, were continued as delegates to the A. M. A. in accordance with the wise policy of returning men of wide knowledge and acquaintanceship. (L. S. Lippincott).

I appreciate very much the honor given to me by the Association and shall do all in my power to carry on the work in a constructive and progressive way. (W. L. Little).

Columbus, a city of culture, is the home of Dr. J. W. Lipscomb, Sr., president of the State Board of Health. He is a wonderful type of the general practitioner. (W. H. Anderson).

As secretary of the state medical association he is the essence of efficiency, and he is courteous and he is diplomatic. The medical profession and the people of Mississippi are wishing for Dr. T. M. Dye a complete and a speedy recovery. (W. H. Anderson).

Oral cancer is usually traceable to chronic irritation plus chronic infection. Radiologists have made notable advances in treating the local cancers of the mouth. (J. A. Beals).

Teaching and practicing abstinence from all alcoholics. (R. C. Smith).

The reminiscences, etc. of Dr. H. A. Gant of Columbia, Tenn., formerly of Water Valley, will be interesting and informative reading. Dr. Gant has been a leader in the medical circles of this state.

Ye editor does not recall having ever attended a State Association prior to this one when Dr. T. M. Dye was not present. (Dr. H. T. Ims). Same here.

Mrs. Leon S. Lippincott achieved much during her year in the presidency and her administration shall be a lasting credit to her unceasing labor for a more extensive organization and a more active auxiliary. (Reporter, Woman's Auxiliary).

Dr. H. L. Sutherland, who resided in Rosedale prior to his death which occurred some twenty years ago, was a man and physician of the highest type, beloved by all. His name was mentioned twice in the June issue of our local Journal, each time spelled incorrectly "Southerland."

Greenville with its beautiful homes, streets and flowers and trees gave us a most hearty and gracious welcome. We want to come again, Greenville, Queen City of the Delta, at some future time. (Dr. Lucien S. Gaudet).

When Drunk, by R. C. Smith, of Drew. This paper was read before the Delta Medical Society, Cleveland, April 8, 1936. We all know that the essayist's information was received solely by observation and reading. He is a leader in everything that is good in his section and I regard him most highly.

I hope his article will be largely read and his conclusions followed.

Dr. Denver C. Funderburke of the Funderburke Clinic, Olive Branch, was a patient in the Baptist Memorial Hospital, Memphis recently. He has resumed his work.

L. L. MINOR, County Editor
Rt. 4, Memphis, Tenn., July 5, 1936.

LEFLORE COUNTY

Dr. Jesse R. Hightower, Itta Bena, who recently received his medical degree at Tulane, and passed the

State Board, will serve his internship at Chattanooga, Tenn., Hospital.

Miss Elizabeth Fatheree, Greenwood, who received her medical certificate at the University of Mississippi, recently, will finish her medical course at the University of Tennessee.

Dr. Russell Hennessey, Memphis, spent June 10 in Greenwood.

Mrs. William Hicks, Inverness, spent the weekend of June 12 to 14 in the home of her parents, Dr. and Mrs. F. M. Sandifer.

W. E. Denman, Jr., student at the Medical Department, University of Tennessee, is at home for the summer.

Miss Marjorie Yates, daughter of Dr. and Mrs. Mrs. R. B. Yates, is at home for the summer from Sophie Newcomb, New Orleans.

Dr. S. L. Brister, Jr., visited Memphis, June 15. Mrs. Brister and daughter have gone to Tuscaloosa, Ala., for a visit.

Dr. I. B. Bright, Greenwood, attended the meeting at Greenville, June 15, of the Association for the Conservation of Wild Life. He was elected secretary of the Association.

Dr. Hugh Gamble, Greenville, passed through Greenwood June 16 on his way to the meeting of the East Mississippi Medical Society.

Dr. G. Y. Gillespie, Sr., was a visitor to Greenwood June 16. He is still in active practice at Duck Hill.

Dr. W. R. Best, Scobey, visited relatives here June 16.

Dr. Tate Carl, Memphis, is taking his vacation here with his parents, Mr. and Mrs. A. S. Carl.

Dr. Theodore Auston, surgeon of the Norfolk, Va., Naval Hospital visited in the home of his mother here, June 18 to 24.

Dr. John A. Crawford, Greenwood, went to the Florida Coast June 27, with a party of friends, for 10 days' deep sea fishing.

W. B. DICKINS, County Editor
Greenwood, July 2, 1936.

WARREN COUNTY

Dr. Alston Callahan, after graduating in medicine from Tulane University in 1933, served an internship in the New Orleans Charity Hospital, subsequently being elected a member of the staff of the eye, ear, nose and throat department of this hospital, where he has served until this past month when this relationship was severed to return to Vicksburg where he has associated himself with his brother, Dr. Edley H. Jones, to do eye, ear, nose and throat practice.

The Vicksburg Infirmary held its monthly staff meeting Wednesday, July 1, with Dr. Preston Herring absent, a most unusual occurrence. Preston was slightly ailing and the nature of his illness causes him to fully agree with the conclusion of another eminent doctor who said, "Every investigation which is guided by principles of nature fixes its ultimate aim entirely on gratifying the stomach."

The many friends of Dr. Guy Sanderson were thrilled with pleasure and appreciation to have the doctor in our midst for a week's visit. Guy is looking fine and it is evident his rest has done him much good, and we anticipate his full recovery to normal physical health within a few more months and ultimate return to friends and professional service.

The July meeting of the Issaquena-Sharkey-Warren Counties Medical Society will be held at the State Charity Hospital in Vicksburg and perhaps all subsequent meetings will be held there, inasmuch as the membership of this society in toto comprises the staff of the hospital under the reorganization plans.

Dr. Felix J. Underwood, state health officer, accompanied by H. A. Kroeze, sanitary engineer, and Ed. Johnston, state sanitation supervisor, made a tour of inspection of Warren County, checking health activities of local workers.

Dr. H. C. Ricks of the State Health Department was in conference this month with Drs. Edley H. Jones, Leon S. Lippincott, Tom Sparks and Mike Smith, looking to the obtaining of supplementary funds for conducting the recently organized clinic of the Issaquena-Sharkey-Warren Counties Medical Society, funds especially to be used in the treatment of indigent venereal disease patients, etc.

Dr. Luis Mazzotti, Departamento se Salubridad Publica, Mexico City, a graduate in medicine from the University of Mexico, was sent to Johns Hopkins University for a year's study by the Rockefeller Foundation. On completion of his work there, the State Board of Health of Mississippi was asked to give him a two weeks' field service. He was assigned to the Warren County Health Department, Vicksburg, where this training has been given.

We are advised that with the reorganization of the State Charity Hospital, Vicksburg, Dr. Nathan B. Lewis, Vicksburg, has been made chief surgeon; Dr. L. R. B. Centanni, house surgeon; Dr. Volney R. Liddell, house physician; and that three junior medicos, C. E. Anderson, Charleston, B. C. Brownson, New Orleans, La., and W. C. Alston, Chicota, Okla., are serving as assistants during the summer. Mr. Anderson and Mr. Brownson are students from Tulane University, and Mr. Alston is from the University of Oklahoma.

At the June meeting of the Issaquena-Sharkey-Warren Counties Medical Society, Dr. F. M. Smith was asked to write a letter of appreciation to the ladies of the Auxiliary for recently having inaugurated a "Doctor's Day" (night) and to tell them in a superlative manner how wonderful their entertainment was, and when all was written that could be written, to set it to music so that the society could incorporate it as a "theme song" along with its "Sweet Adelines," etc. Poor old "Mich" says that "he thinks that sentimentally he is disposed to harmony but organically is incapable of a tune;" that like

"Tom, he was a piper's son,
He learned to play when he was young,
But all the tune that he could play
Was over the hill and far away.".

H. T. IMS, County Editor
Vicksburg, July 10, 1936.

WASHINGTON COUNTY

The many friends of Dr. D. C. Montgomery regret to hear of his recent injury. Dr. Montgomery received a fracture-dislocation of his left shoulder in an automobile accident.

Dr. John F. Lucas, Greenville, motored to Carrollton for a week-end visit with his family who have been enjoying a visit with Mrs. Lucas' mother and father.

Dr. and Mrs. Paul G. Gamble and children, Greenville, have just returned from an extensive automobile trip through the East. They stopped by Nashville, Tenn., to visist Mrs. Gamble's mother and brother.

The many friends of Dr. E. T. White, Greenville, are delighted to hear of the continued improvement of his mother, Mrs. J. A. Johnson, Merigold.

Dr. and Mrs. F. M. Acree, Greenville, are enjoying a visit of Dr. Acree's mother, of Dover, Tenn.

Dr. and Mrs. C. P. Thompson, Greenville, entertained a large number of their friends at bridge recently at their beautiful suburban home.

Dr. T. L. Dobson, Leland, has returned from Hot

Springs, Ark., after a stay of several weeks.

Mr. Lyne Gamble, is at home from Vanderbilt Medical School for a short visit to his parents Dr. and Mrs. H. A. Gamble, Greenville.

Friends are glad to see Dr. A. J. Ware, Greenville, is able to be out again after an illness of several months.

Dr. and Mrs. R. A. Haggard, Arcola, attended the American Legion State Convention held in Greenville, June 21 to 24.

Dr. H. A. Gamble, Greenville, has returned from Chicago, where he attended the meeting of the American Association for the Study of Goiter.

The following announcment will be of interest to their wide circle of friends: Dr. and Mrs. J. W. Copeland, Leland, announce the marriage of their daughter, Grace, to Mr. David J. Johnson, on June 4. Mr. Johnson is in the employ of the Federal Ginning Laboratory at Stoneville. The young couple left after the wedding for Washington, D. C., for a six weeks' visit, after which they will return to Leland to make their home.

Mrs. Paul Gamble, Greenville, attended the National Park meeting at Hartford, Conn. Mrs. Gamble went by plane from Memphis and return. More than two hundred representatives from Park Commissions in the 48 states were in attendance. Mrs. Gamble represented Mississippi. Reports were made of the progress made by the State Parks and the work of the Federal Government. The delegates were guests of the State of Connecticut for two days and made a tour of the state inspecting the parks which are among the most outstanding in the United States.

Miss Mary E. Dorsey, superintendent of the King's Daughters Hospital, at Greenville and president of the Mississippi State Nurses Association, was joined in Memphis by her sisters, Misses Margaret and Alice Dorsey, of Jacksonville, Fla., and together they went to Los Angeles, Cal., where Miss Dorsey attended the biennial convention of the American Nurses Association. Miss Dorsey was a representative of the Mississippi Association.

Dr. E. L. Wilkins, Clarksdale, Dr. M. W. Robertson, Corinth, Dr. J. J. Kazar, Tchula, and Dr. E. R. McLean, Cleveland, attended the American Legion State Convention held in Greenville, June 21 to 24.

JOHN G. ARCHER

Greenville, July 6, 1936.

WINSTON COUNTY

Dr. L. T. Parks, Fearn Springs, was in the city on business this week.

Dr. R. C. Suttle was also in the city this week.

We are glad to note the improvement of Dr. E. L. Richardson since he returned from Hot Springs. He has had a neuritis.

Politics are heating up in this section. Some doctors are mute and others are outspoken. The race for the U. S. Senate will be mixed here.

Dr. H. B. Watkins, Noxapater, was in our city vaccinating against diphtheria. Am not informed as to just how many came out.

The writer was out on an obstetrical case and failed to meet with the doctors in organizing an obstetrical class. Don't know just how many were present I understand this was the beginning of a ten weeks' postgraduate course.

M. L. MONTGOMERY, County Editor

Louisville, July 10, 1936.

HOSPITAL STAFF TRANSACTIONS

FIELD MEMORIAL HOSPITAL

The staff of the Field Memorial Hospital, Centreville, met in conjunction with the Homochitto Valley Medical Society at the hospital, July 9. Speakers were Dr. I. Mims Gage and Dr. Chaille Jamison of New Orleans. Dr. Harvey F. Garrison, Jackson, president, Mississippi State Medical Association, and Dr. W. L. Little, Wesson, president-elect, were guests.

A complete new Westinghouse x-ray unit has been installed this month.

R. J. FIELD

Centreville, July 8, 1936.

HOUSTON HOSPITAL

Dr. Douglas B. Baugh of the Houston Hospital Staff and Miss Mary Frances Jones of Houston were married June 20. They have just returned from a honeymoon tour in Old Mexico.

The marriage of Miss Ann Sanders, superintendent of nurses at the Houston Hospital, and Mr. Jack Tansil, of Starkville, has been recently announced.

The June staff meeting program of Houston Hospital was furnished by the physicians of Vardaman. Dr. E. B. Young read a paper, "Intracranial Hemorrhage of the Newly Born," and Dr. Joseph S. Edmondson read a paper, "The Treatment of Snake Bite." Dr. V. B. Philpot, a native of Vardaman, presided.

Dr. and Mrs. O. B. Crocker, Bruce, are the proud parents of a son, O. B. Jr., who was born at the Houston Hospital June 27.

Houston, July 6, 1936.

KING'S DAUGHTERS HOSPITAL, BROOKHAVEN

Dr. R. C. Massingill and his wife are celebrating the birth of a daughter on June 18, 1936. They named the child Susan.

Dr. R. S. Savage was called to St. Louis recently on account of the death of his father which occurred June 27.

Dr. W. H. Frizell and Mrs. Frizell went to Pensacola to attend the wedding of their son, W. H. Frizell, Jr., to Miss Mitzi Melzer, of Pensacola, June 22.

Dr. J. R. Markette read a paper on "Pellagra" at the recent meeting of the Tri-County Medical Society which met at Tylertown, June 10. Lawrence, Lincoln, and Copiah Counties compose the Tri-County Medical Society.

Dr. J. A. Atkinson returned this week from a vacation spent fishing on the Gulf Coast.

Our hospital has made several improvements lately including a thorough painting inside, installation of a new bell system, and inauguration of eight-hour duty for the general duty nurses.

LUCILLE MULLEN, R.N., Supt.

Brookhaven, July 2, 1936.

MISSISSIPPI BAPTIST HOSPITAL

Drs. Neal, McDill and Garrison, Jr., attempted a fishing trip to the coast and report having had a very nice time, but the fish there were few and far between. In fact, it is reported, that they had a very hard time even buying enough fish to bring home with them. However, they did get enough to have a "fish fry" for the Baptist Hospital Staff meeting at Dr. W. B. Dobson's country estate, Tuesday, June, 16.

At this staff meeting, a number of visitors were present and the hospitality of Dr. and Mrs. Dobson was thoroughly enjoyed by everyone attending.

Dr. J. P. Wall gave a very interesting discussion and case report on "Subphrenic Abscess," illustrated with lantern slides.

Dr. H. R. Shands gave a statistical review and a very interesting discussion on the value of caesarian section performed in the various complications of pregnancy. These case reports were taken from the records of the Mississippi Baptist Hospital.

Doctor V. D. Hagaman gave a case report with interesting eye findings in syphilitic meningitis.

HARVEY F. GARRISON, JR.

Jackson, July 3, 1936.

MISSISSIPPI STATE CHARITY HOSPITAL

A regular monthly meeting of the staff of the Mississippi State Charity Hospital, Vicksburg, was held Tuesday, July 14, with ten members of the staff and fourteen guests present. Dr. Nathan B. Lewis, president, presided.

A committee appointed at the last meeting presented rules and regulations for the staff. These were adopted and approved by the superintendent and were signed by the members present.

The following were elected to the attending staff of the hospital. Drs. F. M. Smith, Alston Callahan, L. J. Clark, and B. B. Martin, Jr.

Reports from the records department were received and discussed.

The next meeting of the staff will be held Tuesday, August 11.

VICKSBURG SANITARIUM

The regular monthly meeting of the Vicksburg Sanitarium was held July 10, and after a supper served at 6:30 p. m., was called to order by the president. Dr. J. A. K. Birchett, Jr., with eleven members of the staff and five guests present. After the transaction of business of the staff and a discussion of the reports from the records department and analysis of the work of the hospital, Dr. F. Michael Smith, Director, Warren County Health Department, presented a report of vital statistics for the month of June.

SPECIAL CASE REPORTS:

1. Obstructive Jaundice in a Negro.—Dr. J. A. K. Birchett, Jr.
2. Pulmonary Tuberculosis With Tubercular Meningitis in a Ten Months Old Infant.—Dr. G. C. Jarratt.
3. Toxemia of Pregnancy.—Dr. R. A. Street, Jr.

Selected roentgen-ray studies were presented as follows: Sarcoma of Ulna, Pulmonary Tuberculosis; Thorax for Discussion; Cholelithiasis.

Three Minute Reports of the Literature of the Month were given as follows:

1. Dr. Leon S. Lippincott.—Primary Carcinoma of Lung.
2. Dr. L. J. Clark—Hydrochloric Acid in Anacidity.
3. Dr. G. C. Jarratt—Childhood and Adult Types of Tuberculosis.
4. Dr. H. H. Johnston—Electrical Hearing Apparati and Atypical Glosso-pharyngeal Neuralgia.

The next meeting of the staff will be held August 10, 1936.

ABSTRACT: OBSTRUCTIVE JAUNDICE IN A NEGRO

J. A. K. Birchett, Jr., M.D.

Patient.—Colored, male, age 47, farmer, first seen in out-patient department May 12, 1936.

CHIEF COMPLAINT.—Jaundice, indigestion, and itching of skin.

HISTORY OF PRESENT COMPLAINT.—About six months ago began to have abdominal pain and gaseous indigestion after taking food. Never did have to have any hypodermic for relief of pain. Pain usually subsided after belching or the taking of soda. A few weeks after onset of indigestion, began to have clay-colored stools and eyes began to get yellow and the urine began to appear the color of strong coffee. Has lost nearly 80 pounds in weight.

PAST HISTORY.—No intestinal bleeding; no cough, no fever, does not suffer with nervousness. Appetite good, even though there is discomfort after eating; tendency to be constipated. No cardiac, genito-urinary or respiratory symptoms.

PHYSICAL EXAMINATION.—Rather tall, fairly well built. Temperature 98°F.; pulse 80; respiration 18; blood pressure 140/80. Marked jaundice of sclerae; floor of mouth shows jaundice; evidence of surface excoriations apparently due to scratching. Heart normal; lungs negative. Some tenderness over right upper quadrant of abdomen; no masses palpable; no rigidity. Genito-urinary tract negative, except for bile in the urine which gives it a deep mahogany color. Reflexes normal.

TENTATIVE DIAGNOSIS.—With the history of gastric disturbance, marked loss of weight, and the intense jaundice, it was thought that this man was possibly suffering from malignancy of the pancreas or biliary tract.

PROCEDURE.—Advised to have complete gastroenterological and laboratory study. Cholecystography showed no filling of gall bladder. Gastric series showed a normal stomach and cap; no evidence of ulcer deformity. There was some duodenal stasis. The abdomen under fluoroscopic examination was normal, ruling out the possibility of an obstructive growth of the stomach or duodenum. It was thought, however, that there was a possibility that there might be common duct obstruction although no calculi were evident, as the direct Van den Bergh reaction was positive and the icterus index 130; also the possibility of chronic pancreatitis or malignancy of the pancreas. Some renal irritation was evidenced by the urine examination.

Blood Wassermann, negative. Blood urea nitrogen, 16.35 mg. per 100 c.c.; chlorides, 480 mg.; calcium 10 mg.; all within normal limits. Leukocytes 15,300; polymorphonuclears 91 per cent. Erythrocytes 3,410,000.

Exploratory laparotomy was deemed advisable and 10 grains of calcium were given daily for four days with 10 per cent glucose solution intravenously to build up the glycogen stored in the liver.

OPERATION.—On May 19, under general anaesthesia, upper right rectus incision was made through a markedly jaundiced abdominal wall. Bleeding was not marked. Duodenum and stomach were somewhat adherent to the under surface of the liver and the duodenum dilated. Adhesions were separated, giving access to a small shrunken gallbladder which was thickened but contained no stones. Duodenum and hepatic portion of common duct were picked up with Allis clamps and carefully inspected. The duct was moderately dilated. The pancreatic portion of the duct was not easily inspected because of a marked enlargement of the head of the pancreas. This was thought to be the cause of the occlusion of the duct as there was no evidence of stone. There were many large glands along the common duct. The gallbladder was easily opened and contained thick black bile. A flexible probe was passed into the common duct through the cystic duct and no obstruction found. It was thought that because of the severity of the patient's illness and the lowered resistance, it would be best not to open and explore the common duct. It was not thought necessary to do an anastomosis between the gallbladder and stomach to make a permanent fistulous opening between these structures.

Simple cholecystostomy was done for decompression of the enlarged liver and relief of the pancreatic distention.

SUBSEQUENT.—The progress was uneventful. Liver extract was given intramuscularly every four days and hypertonic glucose solution for the first week. Thereafter liquids were taken.

June 1, patient was taken to the fluoroscopic room and lipiodol injected into the gallbladder through the cholecystostomy tube. It was possible to see the opaque oil pass down through the common duct into the duodenum, giving evidence that the common duct was patent. The cholecystostomy tube was, therefore, clamped and bile began to pass into the bowel; the stools assumed a normal color and have remained so since except as noted later. The cholecystostomy tube was removed June 6, with little bile drainage from the sinus.

June 7, there was a rigor with rise of temperature and for a day or two stools became clay colored again. Following administration of merchrochrome solution and protiodide of mercury, stools again assumed a normal color. The reaction was attributed to some mild irritation, possibly the lipiodol.

Discharged on thirty-third day after admission feeling much better, gaining weight, with the jaundice rapidly disappearing.

ABSTRACT: PULMONARY TUBERCULOSIS WITH TUBERCULAR MENINGITIS IN A TEN MONTHS OLD INFANT

G. C. Jarratt, M.D.

PATIENT.—White, male, age 8 months, seen in clinic March 1, 1936, with history of having been exposed for six weeks to an acute active case of tuberculosis three months ago.

PHYSICAL EXAMINATION.—Not remarkable. Had gained weight and was taking diet for infant of eight months of age. Had been under observation since birth. Normal delivery and normal progress up to this time. Temperature 100°F. (by rectum); weight 17½ pounds.

Mantoux tuberculin test (1-1000)—4 plus reaction at end of 48 hours. Blood: hemoglobin 55 per cent; erythrocytes 3,730,000; leukocytes 16,600; polymorphs 51.5 per cent, lymphocytes 48.5 per cent; no malaria found. X-ray examination of chest revealed enlarged mediastinal glands and some haziness of left hilus.

TREATMENT.—Source of infection removed from the home. Normal diet formula, orange juice and cod liver oil for infant of eight months. Also daily exposure to small increasing doses of ultra violet irradiation. Warned against exposure to respiratory infections, especially pertussis and measles.

Admitted to hospital March 18, 1936, with acute respiratory infection of three days' duration.

PHYSICAL EXAMINATION.—Well developed and well nourished; acutely ill with upper respiratory infection complicated with acute bronchitis, mostly confined to left chest; mild left otitis media. No signs of consolidation of lungs. Liver and spleen two fingers' breadth below costal margin and slight enlargement of cervical glands, especially on left side. Temperature 102°F.; weight 17 pounds, 10 ounces.

Hb. 87 per cent; erythrocytes 4,050,000, leukocytes 11,100, polymorphs 56 per cent, lymphocytes 42 per cent, eosinophils 2 per cent, no malaria found. Urine not remarkable. Roentgen-ray examination of chest shows less involvement of mediastinal glands and also less haziness of left hilus.

With benzoin inhalations and mustard plasters to chest, infant seemed to improve from respiratory infection except there still remained signs of the bronchitis involving the left chest.

March 29.—Tubercle bacilli were found in sputum collected from the larynx by suction following coughing.

Since roentgen-ray examination showed most of the lung involvement in left lung, artificial pneumothorax was begun by daily injection of air into left pleural cavity. Following this, infant seemed to improve until April 9, when temperature again went up above normal and injections of air into left pleural cavity were discontinued until April 14. At this time physical examination showed fluid in left pleural cavity; 20 c.c. of straw colored fluid were removed. Examination showed: cell count 9,600; polymorphs 100 per cent; albumin 3-plus. Culture showed no growth. No tubercle bacilli were found.

April 21.—75 c.c. of whole citrated blood were given intravenously using the grandfather as donor. Injection of air into the left pleural cavity was again begun and infant ate better and seemed to improve, but there was a rapid and progressive loss of weight. Glands on left side of neck progressively increased in size. Liver and spleen became larger. No fluid in abdominal cavity.

Roentgen-ray examination of chest revealed partial collapse of left lung. April 21 to May 15, temperature was from 99 to 101°F.

May 22.—Infant became listless and began refusal of food, stuperous. Physical examination showed a slight stiffness of neck, positive Brudzinski sign and hyperactive knee jerks. Spinal puncture was done and 2 c.c. of slightly cloudy fluid obtained, under no increased pressure. Examination of spinal fluid showed leukocytes 791 per c.m., small mononuclears 55 per cent, large mononuclears 18 per cent, polymorphs 27 per cent; globulin 3-plus; cultures showed no growth; no tubercle bacilli found.

Infant continued to refuse food and was fed by gavage. Became more listless; and a flaccid paralysis of entire body; cephalic cry when disturbed; at times projectile vomiting.

May 28.—Spinal puncture done and 10 c.c. of cloudy fluid obtained under slightly increased pressure. Examination of fluid showed leukocytes 490; small mononuclears 0.3 per cent, large mononuclears 0.3 per cent, polymorphs 99.4 per cent; globulin 4-plus; sugar (quantitative) 12.5 milligrams per 100 cc.; culture showed no growth; no tubercle bacilli found.

Wassermann, Kahn, Kline and Young tests negative.

Infant continued in state of coma with flaccid paralysis and, at times, muscular twitchings and the gavage feeding was continued up to time of death, June 3, 1936.

Postmortem examination by Dr. Leon S. Lippincott, showed generalized miliary tuberculosis.

HONOR ROLL

The following have contributed to the Mississippi State Medical Association section this month:

COUNTY EDITORS: G. E. Godman, N. C. Knight, L. L. Minor, H. F. Garrison, Jr., W. B. Dickins, H. T. Ims, John G. Archer, M. L. Montgomery.—8.

SOCIETIES: Amite and Wilkinson Counties, D. H. Thornhill; Central, H. F. Garrison, Jr.; Issaquena-Sharkey-Warren Counties; North Mississippi, A. H. Little; Mississippi State Pediatric, Harvey F. Garrison, Jr.—5.

HOSPITALS: Field Memorial Hospital, R. J. Field; Houston Hospital; King's Daughters' Hospital, Brookhaven, Lucille Mullen; Mississippi Baptist Hospital, Harvey F. Garrison, Jr., Mississippi State Charity Hospital, Vicksburg; Vicksburg Sanitarium.—6.

OTHERS: Felix J. Underwood.

TOTAL—20.

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Dr. and Mrs. Edley Jones gave a series of lovely parties recently and everyone had a most delightful time.

Dr. and Mrs. Richard Street had a lovely night party last week at the tea room and a very enjoyable evening was had by all.

Mrs. F. M. Smith and her two most attractive daughters, Cassie and Maurine gave a series of day parties to a large host of their friends. A delicious plate luncheon was served to the guests.

Dr. and Mrs. Hugh Johnston spent a week-end in New Orleans and report a delightful time.

Mrs. Laurence Clark and two charming children are spending two weeks in Clinton, Miss., with Mrs. Clark's parents, Mr. and Mrs. Robert Johnston.

Mrs. Leon Lippincott and son, Stanley, have returned from New Orleans where they spent several days.

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The doctors' wives of Prentiss County met August 4 on the spacious lawn of the home of Dr. and Mrs. R. B. Caldwell, of Baldwyn. The doctors met at the same time for their monthly staff meeting, and later doctors and wives enjoyed a bounteous picnic supper.

Mrs. R. B. Cunningham, Mrs. L. L. McDougal, Booneville, Mrs. H. A. Stokes, Guntown, Mrs. Robert Christian and Mrs. Caldwell were present.

Mrs. L. L. McDougal, Sr., of Booneville, is president of the Auxiliary.

Dr. and Mrs. L. L. McDougal are enjoying a visit from their son, Dr. Myers McDougal, of Yale University and Dr. Mulden, of the University of North Carolina.

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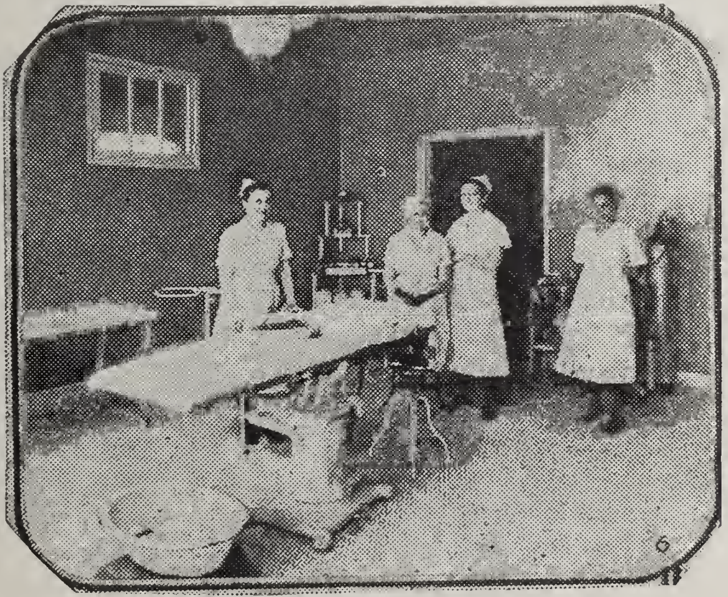

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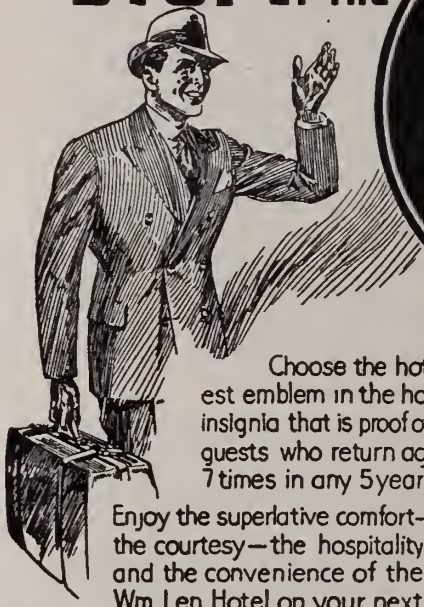

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tor sugar."—*H. B. Gladstone*
Infant Feeding and Nutrition
William Heinemann, Ltd., Lon-
don, 1928, pp. 11, 79.

SERIOUSNESS OF DIARRHEA

There is a widespread opinion that, thanks to improved sanitation, infantile diarrhea is no longer of serious aspect. But Holt and McIntosh declare that diarrhea "is still a problem of the foremost importance, producing a number of deaths each year. . . ." Because dehydration is so often an insidious development even in mild cases, prompt and effective treatment is vital. Little states (Canad. Med. A. J. 13:803, 1923), "There are cases on record where death has taken place within 24 hours of the time of onset of the first symptoms."

In cases of diarrhea, "For the first day or so no sugar should be added to the milk. If the bowel movements improve carbohydrates may be added. This should be the one that is most easily assimilated, so dextri-maltose is the carbohydrate of choice."—*W. H. McCaslan: Summer diarrheas in infants and young child- . . . Alabama, 1:278-282*

. . . fermentation
. . . bowel and have a definitel
laxative tendency, which may
when carried to excess, caus
severe intestinal irritation.
"The more complex carbohy-
drates, of which dextrin is th
type, ferment more gradually and
do not have this laxative effect."
Regarding the treatment o
diarrhea, "In our experience, the
most satisfactory carbohydrate
for routine use is Mead's dextri-
maltose No. 1."—*F. R. Taylor:*
"Summer Complaints," Southern
Med. & Surg., pp. 655-559, Aug.

"If there is an improvement in . . .
ments carbohydrate may be adde . . .
ing the teaching of the originator . . .
the carbohydrate added should be the one that is
most easily assimilated. Dextri-maltose is there-
fore the carbohydrate of choice."—*Summer diar-*
rheas in the young. International . . .
9:111-115 . . .

. . . the treatment of diarrhea, "The sugar is added gradually as co
ditions admit, some sugar other than milk sugar or cane sugar bein
used, preferably dextrin and maltose."—*H. E. Small: Diarrhoea i*
bottle-fed infants. J. Maine M. A. 12:154-158, Jan. 1922.

"The condition in which dextri-maltose is partic . . .
in acute attacks of vomiting, diarrhea and fever. It seems that . . .
covery is more rapid and recurrence less likely to take place if dex-
tri-maltose is substituted for milk sugar or cane sugar when thes
have been used, and the subsequent gain in weight is more rapid.
"In brief, I think it safe to say that pediatricians are relying les
implicitly on milk sugar, but are inclined to split the sugar element
giving cane sugar a place of value, and dextri-maltose a decidedl
prominent place, particularly in acute and difficult cases."—*W. D*
Hoskins: Present tendencies in infant feeding. Indianapolis M. J
July, 1914.

"It should be . . .
of lactose may cause diarrhoea. If a higher per-
centage of sugar be required it is better to replace
it by dextri-maltose, such as Mead's Nos. 1 and 2,
where the maltose is only slightly in excess of the
dextrins, thus diminishing the possibility of ex-
cessive fermentation."—*W. J. Pearson: Common*
practices in infant feeding, Post-Graduate Med. J.
6:38, 1930; abst. Brit. J. Child. Dis. 28:152-153,
April-June, 1931.

. . . gradual transition to a whole milk or
evaporated milk formula, which will supply about
one and one-half to two ounces of whole milk to
every pound of body weight, is reached. This also
should finally have the addition of dextri-maltose
amounting to five to seven per cent."—*R. A.*
Strong: Summer diarrheas in infancy and early
childhood. Arch. Pedia . . .

that group of organisms thrive on) and . . . low in sugar (the food whic
nate milk accomplishes this purpose. In our series of cases, we foun
it was necessary to use the casein calcium for from 5-8 days; w
then stopped it and added dextri-maltose to the formula."—*A. G*
DeSanctis and L. V. Paider: The value of calcium caseinate milk in
fermentative diarrhea, Arch. Pedial. 38:233-236, April, 1921

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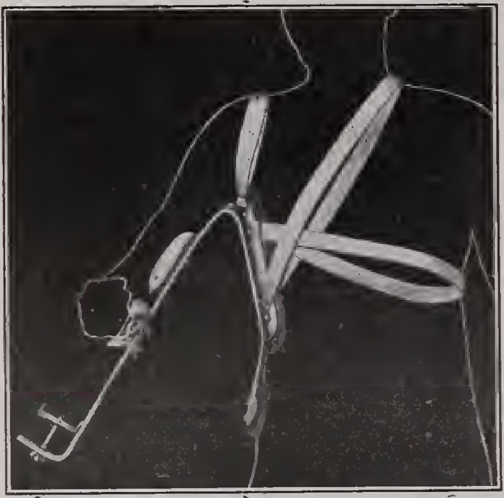

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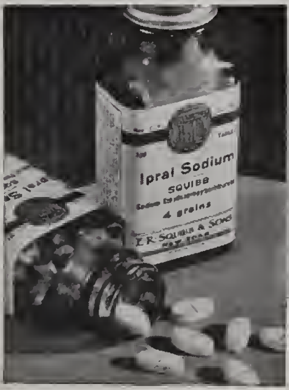

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The Diarrheas of Early Life*

ROBERT A. STRONG, M.D.‡
New Orleans, La.

IN DISCUSSING the selection of subjects for the initial five extension postgraduate lectures on pediatrics with members of the Committee on Postgraduate Medical Education representing the sponsors and members of the Mississippi State Pediatric Society at a joint meeting held in Jackson, the opinion was quite unanimous that a large part of the time of the third lecture, Nutritional Diseases of Infancy and Childhood, should be dedicated to the diarrheas of early life. It is not difficult to understand this opinion because there are few phases of pediatrics on which there has been more difference of opinion. It has been a subject in which we have all been interested and I have followed the progress of our knowledge of the subject since I first began the practice of diseases of children. First, because the mortality from diarrheal diseases was little less than a national calamity about two decades ago and it was very necessary to know as much as possible in order to handle what constituted the greater part of practice. Then in more recent years I accepted the obligation to clarify, to the best of my ability, the bewilderment of students and practitioners which resulted from the conflict of opposed opinion which has prevailed since the days of Liebig and Biedert in 1870. Consequently it has been my duty frequently to use it as a subject for editorials in the International Medical Digest and constantly to try to separate proven facts which have stood the test of clinical trial from those measures which have not, in order that I could feel content that the students would leave college in possession of the best available means that we could give them to meet the problem of diarrhea in the little patients whose care they shortly were to assume.

In the past five decades during which nutrition and nutritional disturbances have received intensive study, the conceptions and theories concerning both have undergone changes which have been both frequent and radical. Consequently, the history of this phase of pediatrics has been profoundly interesting. The era of definite progress in the study of the disturbances involving the intestinal tract of early life may be said to have begun about 50 years ago when Weiderhofer gave out his first suggestions for a classification of diarrheas. The suggestion that they be called gastric catarrh, gastro-enteritis, ileocolitis and duodenitis came from him and were based on the anatomic and pathologic changes in the intestinal tract as he found them at autopsy in children dying of diarrheal diseases.

This period is referred to by students of the subject as the anatomicopathologic era. This era was short-lived for the reason that Heubner and others showed just what we know at the present time, that the anatomic and pathologic changes in diarrheas in early life are most inconsequential. Soon afterward the immortal Pasteur and Koch opened up the era of bacteriology and Escherich and others undertook to explain the diarrheas on the basis of the various bacteria found in the intestinal tract. They likewise were never able firmly to establish an entirely acceptable understanding of classification from this standpoint.

Shortly after this, studies in metabolism introduced another era. Interest in the digestion and assimilation of food was becoming widespread. The progress made during this period was most satisfactory and endured for a longer time than any of those which preceded it. The names of Czerny, Keller, Finkelstein, Moro and Rotch first came into prominence, and as a result of their contributions made at this time, they long will be remembered. It was Czerny who first suggested the term **nutritional disturbances** to describe conditions which created diarrhea in early life. In association with Keller, a classification was suggested by him which, in the main, regarded the disturbances as being due to the improper utilization of the individual food elements such as fat, carbohydrate and protein. About this time Rotch declared that protein was the offending element and the high fat "top milk formulas" were devised after the much complicated mathematics necessary to determine the percentage of individual food elements which should go into the baby's bottle. This did not endure very long before a conflict on "infant feeding" ensued.

---

*Abstract of one of a series of Five Extension Postgraduate Lectures in Pediatrics delivered at various centers in Mississippi during the summer of 1936.

‡Professor and Head of the Department of Pediatrics, School of Medicine and the Graduate School of Tulane University, New Orleans.

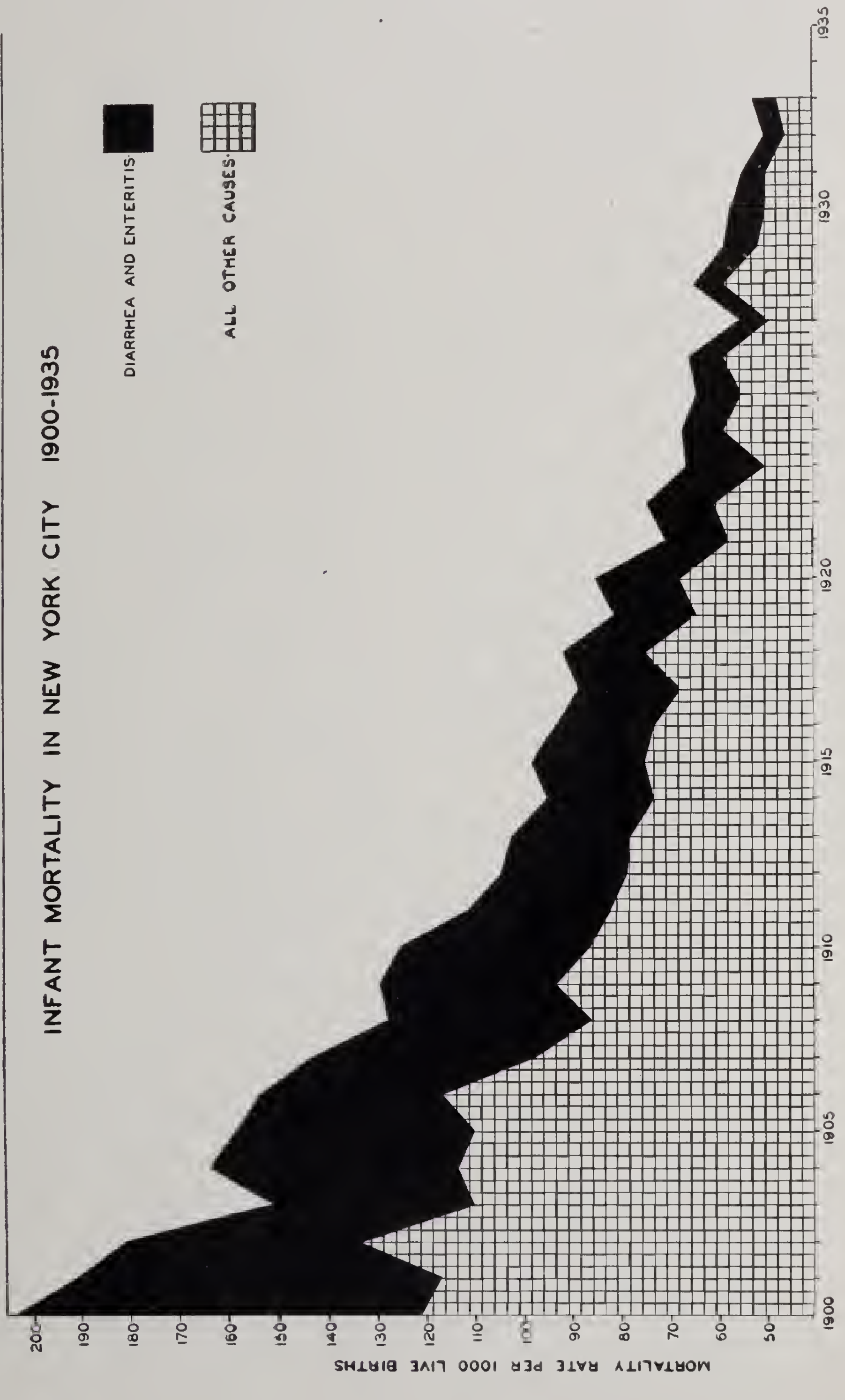
During the Finkelstein, Czerny, Keller period, such terms as "decomposition," "dyspepsia" and "alimentary intoxication" came into existence as suitable terms to designate the several types of nutritional disturbances prevailing at the time. Those who have watched the progress of these studies for the past 25 years continue to believe that the classifications and conceptions of Finkelstein, Czerny and Keller were most sound and served to open up new vistas which have been followed advantageously by work of a more recent date. An example of the remarkable clinical and scientific acumen of these three Germans may be found even at the present time in manifestations of disturbances of nutrition which may still follow the improper use of the very extensive infant materials now available to pediatricians. Finkelstein recognized and described a condition which was formerly widespread and can be recalled easily by some of the pediatricians of this period. It was a form of malnutrition which he called **"milchnahrschaden."** Infants affected with this condition were usually very pale and passed large, hard, dry, crumbly and constipated stools, which were gray or white in color and contained a considerable amount of lime soaps. The weight remained stationary and later there was weight loss and the infant was fretful and very much disturbed. Finkelstein recognized this condition as being due to several causes. It was seen when babies were fed an excessive amount of raw cow's milk with an inadequate amount of carbohydrate, and it was likewise seen in the baby fed on a high fat, top milk formula. As soon as the feeding of high fats was discontinued and more calories were introduced in the form of dextrimaltose, the condition was seen less frequently. If we feed the present-day baby in the same manner or if the cow's milk used in feeding comes from a herd composed exclusively of Jersey or Guernsey cows, it is possible for us to see the same thing. The boiling of cow's milk, which renders the curd more flocculent, has likewise contributed to the elimination of this nutritional disturbance.

Again, what Finkelstein spoke of as **dekomposition** we call at the present time atrophy or athrepsia, to describe the infant which is approximately 40 per cent underweight because of severe malnutrition. Finkelstein's term of **alimentary intoxication** is still retained by some to describe the acute toxic diarrhea of sudden onset, followed by collapse, high fever, vomiting, profuse watery diarrhea, deep respirations characteristic of air hunger, loss of tissue turgor and all of the conventional signs of the present-day dehydration, anhydremia, acidosis and alkalosis. Anyway, Finkelstein, Czerny and Keller not only paved the way but contributed largely to our present-day conception of the diarrheas of early life.

In the light of our present knowledge, the tendency to consider the various forms of malnutrition as merely stages of the same condition is apparently becoming general. During the present century, the progress of our knowledge of this condition is most graphically illustrated in any chart showing the incidence of diarrheal diseases from 1900 to 1936. Reference to the chart, of the infant mortality in New York City from 1900 to 1935 will show the amazing decrease of deaths caused by diarrhea, which has always topped the list above all other causes of infant mortality. It reflects a most encouraging progress and is a tribute to those men who have interested themselves in preventing and more successfully treating the diarrheas of early life. Nevertheless, it will be seen that diarrheal diseases still account for more deaths among infants than all of the causes combined.

In discussing diarrhea, Marriott, in a recent revision of his book on Infant Nutrition, called attention to the fact that the actual number of deaths attributed to diarrhea was by no means as great as vital statistics would indicate, because of the fact that infants seriously ill from any cause are likely to develop diarrhea as a terminal symptom and when the original disease has been undiagnosed, diarrhea is given as the cause of death. Even with due allowance for this fact, he informs us that the mortality from infant diarrhea is high, and unnecessarily so because most pediatricians now believe with him that diarrheal diseases are for the most part preventable.

Marriott explains that there are a number of reasons why infants are more likely to develop a diarrhea than older individuals. The gastrointestinal secretions of the infant differ in composition from those of older individuals. The gastric juice contains less pepsin, rennin and much less hydrochloric acid. The gastric juice of the infant is well adapted to initiate the process of digestion when human milk is fed. Under such circumstances the curds formed in the stomach are very small and the contents become sufficiently acid to inhibit bacterial growth. At this point attention may be called to an important change in our conception of the opening and closing of the pyloric valve. It will be recalled that we once believed that when the material in the antrum of the pylorus was acid the valve opened, and when it was alkaline it remained closed. Likewise, when the duodenal side of the pyloric valve was alkaline, which it formerly was believed to be, no inhibition toward permitting the valve to remain open occurred. When the duodenal side of the valve, however, became acid, it was believed that it caused a complete closure. Since then, physiologists accept the belief of Klein that acidity on the gastric or duodenal sides does not normally control


INFANT MORTALITY IN NEW YORK CITY 1900-1935
DIARRHEA AND ENTERITIS
ALL OTHER CAUSES
MORTALITY RATE PER 1000 LIVE BIRTHS
200
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1935

the activity of the pylorus, but the fluidity of the chyme in the antrum is the factor of prime importance. Moreover, the reaction of the duodenum is more frequently acid than it is alkaline, so, as Marriott contends, the passage of the stomach contents into the duodenum when human milk is the food results in an acid condition which is normally maintained throughout the upper portion of the tract for a considerable length of time. As a result of this acidity, he reasons that the stomach and upper portion of the intestinal tract can normally be maintained free from bacteria capable of causing any of the gastro-intestinal disturbances. It is for this reason that the baby fed exclusively on breast milk rarely suffers from severe diarrhea.

It will be recalled that it was Marriott who, a few years ago, invited attention to the fact that when a child had any parenteral infection, such as otitis media or rhinopharyngeal infections, it was very likely to develop a diarrhea. At the time, this was regarded as being extraordinary, but the basis for his view was soon recognized as being quite sound. These infections are usually accompanied by fever, and when a child has any marked elevation of temperature, the secretion of gastric acid and of the pancreatic and gastric enzymes is markedly diminished. It is not difficult then to understand how the resulting impairment in digestion is very likely to lead to diarrhea. When a child is exposed to very high temperature, as in the hot months of summer, the same thing occurs. Lessened gastric secretion likewise occurs when an infant becomes very much undernourished from any cause.

It is readily understood that an infant, at best, does not possess the same capacity for digesting foods as does the adult who has stronger gastro-intestinal secretions. For this reason the diet of the artificially fed infant must be limited largely to milk with added sugar during the first months of life. Then it must never be forgotten that milk, which is one of the most useful articles of food, is likewise a most perfect culture medium for bacteria. For this reason all milk fed to a young baby **must be boiled.** Boiling does two things. It, of course, renders the milk sterile, but, in addition, it so changes the milk that the curd of boiled milk is very much more subdivided during the process of digestion than that of raw milk. No single factor has been more responsible for the steady decline in the incidence of diarrheal disease in early life than the now popular custom of boiling milk. The large tough curds of raw milk acted as mechanical irritants and enmeshed and protected the contamination bacteria from the well known bactericidal action of the gastric juice.

All of these facts explain quite satisfactorily why we must expect to see more diarrheas in summer in poorly nourished children who are very susceptible to infection, with the consequently diminished digestive capacity. Of course, infections generally in the intestinal tract may initiate a diarrhea in any type of child, but when the upper intestinal tract is deprived of its normal protection afforded by acidity, we must expect the growth of organisms which are normally present only in the lower bowel. Highly concentrated foods and especially excessive amounts of cane sugar, which the condensed-milk-fed baby receives, will likewise cause fermentation which irritates the intestinal tract and causes diarrhea.

In the light of our present knowledge, the following classification will serve for descriptive purposes:

Mechanical Diarrhea: This is usually due to mechanical irritation of the intestinal tract Tough curds resulting from the digestion of raw cow's milk may frequently initiate this type. It is also seen about the fifth or sixth month, when vegetables and coarser food are introduced into the diet of the infant. It is for this reason that the importance of finely subdividing cooked vegetables is emphasized.

Fermentative Diarrhea: This is usually the result of carbohydrate fermentation.

Infectious Diarrhea: This may be merely the consequence of conditions caused by fermentation in which bacteria may become active.

Acute Intestinal Intoxication: This form of diarrhea is usually very severe. It occurs in poorly nourished children, especially those who have been improperly fed artificially, and in those who have suffered from chronic and repeated acute infection. It is the same type that Finkelstein described under his term of "alimentary intoxication," and is also analogous to the older type which was spoken of as cholera infantum.

Treatment.—While it is desirable to recognize diarrheas in the several classes mentioned above, it is not now regarded as necessary for their therapeutic management because there are certain fundamental things in the treatment of diarrheas common to all. The classes mentioned after all may really be regarded as phases of the whole condition.

The management of the milder phases, such as the fermentative or mechanical diarrhea, is sometimes quite simple if they are seen early enough. A mild cathartic, such as tablespoonful doses of equal parts of milk of magnesia and the aromatic syrup of rhubarb, castor oil or your favorite purgative provided it is not too drastic, and the withdrawal of food for about 12 hours, followed by the judicious administration of a diet, are frequently all that is necessary. It may be well to recall, however, that any of them, no matter what they may be in the start, may suddenly manifest a high temperature with a convulsion. This initiates the severe type to which the name **acute intestinal intoxication** is given. The severe diarrhea and vomiting soon dehydrates the baby, depletes it of hydrochloric acid, with the resulting loss of chlorides, and produces an alkalosis. The clinical picture is familiar to all. We may find that a hitherto robust baby has suddenly lost a pound or more of weight; the face is white-gray, pinched and sunken; the lips are cherry red; the eyes are half closed with an internal strabismus in one or both; the respiration is of the deep gasping air-hunger type; the thighs are flexed on the abdomen, which is markedly retracted; the skin has lost its turgor; the arms are drawn up and the fists are clinched into what Finkelstein used to speak of as the "boxer's position." In fact the picture is one of impending death. The prognosis is grave and calls for prompt and energetic treatment.

There are three things which must be met in the treatment of this clinical picture. First the baby is urgently in need of fluids to overcome the hypohydration (dehydration). In addition, it has become demineralized from the loss of base from the cells of the body, the intracellular fluids and blood plasma as well some of the fixed bases such as, sodium, potassium, calcium or magnesium in an amount sufficient to cause a negative base balance. Second, it is necessary to take some step to eliminate some of the toxemia which initiated the symptoms. Third, the acidosis or alkalosis must be overcome.

If the child is in convulsions and has a marked degree of hyperexia, which is usually the case, efforts to relieve both would naturally be the first step. Hydrotherapy is still considered as being the most effective means of ameliorating convulsions and high temperature. The warm pack, the mustard pack, mustard bath or warm bath may be used. Some prefer the baths because the lower bowels may be irrigated while the child is in the tub and two measures may be used at the same time. When packs or baths are used an ice bag or cold cloths should be applied to the head. A hyperdermic of morphine should be given to these babies in doses of a sixteenth to a twentieth of a grain depending on age. Morphine relieves the pain which they are undoubtedly suffering and certainly can do no harm. Purgatives are distinctly contraindicated as the elimination from the intestinal tract is most complete and in fact too thorough for the general good of the baby.

Persistent vomiting usually obviates any possibility of giving very much fluid by mouth. Frequently the vomiting may be relieved by gastric lavage. A small catheter attached to a funnel may be used. The distance from the teeth to the stomach should be marked on the catheter before it is inserted to prevent is being coiled in the stomach. A weak solution of bicarbonate of soda has proved to be most useful for stomach washing, as it facilitates the dissolution of tenacious mucus if present. The capacity of the baby's stomach should always be considered. This may be determined by adding two to the age in months. In order to avoid dilating the stomach and causing cardiac embarrassment only two-thirds the stomach capacity should be introduced at one time before syphoning it off.

After having relieved the convulsions and hyperexia the administration of fluids and minerals should be started without delay. The child is very much depleted of both. In order to understand the rational of the parenteral administration of fluids a brief understandable explanation may be given at this point. It should be remembered that the circulatory system of the human body is sensitive to changes in the volume of its fluid content and is adversely influenced by any marked variation in this volume. The quantity of blood in the body normally bears a rather definite relation to the body weight. Previous to the development of methods now in use for estimating blood volume, it was believed that blood constituted about 1-13 of the body weight (about 7.7 per cent). This figure has now been revised and the normal blood volume has been shown to constitute about 1-20 of the body weight (from 5 to 5.3 per cent). Briefly stated when there is great loss of fluid by vomiting and diarrhea one of the things occurring is that the water balance is disturbed in that the liquid portion is greatly reduced. This results in what has been designated as anhydremia.

In addition the mineral balance of the body is greatly disturbed. In this connection it should be remembered that in the course of normal metabolism. large quantities of acids are formed in, and eliminated from the body. These acids are chiefly carbonic, lactic, phosphoric and sulphuric. In order to maintain the normal reaction of the blood and other body fluids (that of faint alkalinity corresponding to PH 7.4) which is essential to health and life, the greater part of these acids, with the exception of carbonic acid, as soon as formed and while still in the body, must be neutralized almost completely by base of the cells, the intracellular fluids and the blood plasma. Release of base for this purpose must not be attended by any appreciable change in acidity, and excretion of the excess acids must not remove from the body any fixed base, that is, sodium, potassium, calcium or magnesium in an amount sufficient to cause a negative base balance. In health this does not occur, and the body fluids maintain with but a surprisingly variation their normal osmolar, electolyte (base bound to anions) and hydrogen ion concentrations.

In disease condition, however, factors may operate in such a manner as to lead to serious change in the composition of body fluids. In vomiting and diarrhea among other conditions, alterations in the chemistry of the blood and tissue fluids occur which result in dehydration with **either acidosis or alkalosis.** In turn, such changes as these are the result most frequently from the loss of gastro-intestinal secretions such as will most certainly follow excessive vomiting and diarrhea.

To overcome then the dehydration with acidosis and alkalosis is our objective in administering fluids. Formerly, it has been necessary to differentiate sharply between acidosis (a shift in the hydrogen ion concentration to increased acidity) and (alkalosis, a shift in the hydrogen ion concentration to increased alkalinity), in order to institute proper therapy. This called for frequent analyses of the blood, which were often difficult to make because of the difficulty in obtaining blood from these young children, lack of laboratory facilities, expense as well as the fact that the determinations were time consuming when time was at a premium. In other words blood chemistry of this type was practically impossible and beyond the reach of the rural practitioner.

Fortunately this is no longer necessary for after long and careful study of the problem, which made full use of the observations of many other workers, Alexis Hartmann has developed a "Combined" solution which consists of sodium lactate in combination with hypotonic Ringer's solution, effective against dehydration with a moderate degree of alkalosis and acidosis.

The solution works on the principle that it restores water to the dehydrated blood and tissue fluids because of its hypotonicity; it supplies chloride and finally supplies sodium, potassium and calcium in proper proportions, bicarbonate of soda as well as exerting an antiketogenic effect. It is of such composition, however, that the body, even in the presence of severely damaged kidneys, can select from it what it needs for retention and yet excrete what it may not require.

Its use therefore, makes practically unnecessary chemical analysis of the blood. When given in sufficient amount to restore and maintain skin turgor the chemical changes which constitute either alkalosis disappear rapidly. This solution has been used routinely in the St. Louis Children's Hospital by Hartmann since 1930.

This solution may be obtained in 10 and 20 c.c. ampoules* which may be diluted 25 times with sterile distilled water (preferably autoclaved) or it may be had in 500 and 100 c.c. flasks to which previously sterilized tubing, to which may be attached a Murphy-type glass drip and tips which fit Luer needles. Administration sets completely sterilized and packed in cartons ready for use may be obtained from the several firms which prepare the many solutions used parenterally.‡

Dextrose may be combined with the Lactate-Ringers Solution to supply calories to the baby during the starvation period. The water in a solution containing dextrose is released the moment the dextrose is oxidized to carbon dioxide and water, which being eliminated by the lungs, relieves any burden on the kidneys whose functions are more or less impaired during an Acute Intestinal Intoxication.

Blood transfusions have proved beneficial to restore the blood volume and increase the infant's resistance but **under no circumstances** should transfusions of blood be used until after fluid restoration has been accomplished.

Of course, no attempt should be made to give food by mouth in severe cases of diarrhea with toxic symptoms. We rely entirely on the fluids administered otherwise and on the dextrose administered in the Hartmann solution.

As soon as the general symptoms of the child improve, it usually becomes capable of retaining food by mouth. We may begin with a weak tea sweetened with saccharine, just as Finkelstein used to advocate many years ago. It may be given as often as the child cares to take it. Finkelstein's protein milk (Eiweiss Milch) is still regarded as being the most desirable food on which to begin to feed these infants. Since it is now available in a powdered form, the objection raised to the trouble in preparing it no longer exists. In using protein milk the early advice of Finkelstein should be recalled. This was that protein milk has a caloric value of about one half that of whole cow's milk. It is necessary to add carbohydrate, therefore, to increase its food value. The initial amount of protein milk should be from 1 to 1½ ounces (30 to 45 c.c.), six to ten times a day. This should be continued for several days, when it should be gradually increased as symptoms will permit until the baby is receiving about 4 ounces of milk to the pound of body weight each day. Thirty-two ounces (500 c.c.) a day should not be exceeded. If there is an improvement in the bowel movements, carbohydrate may be added. Again, following the teaching of the originator of protein milk, the carbohydrate added should be the one that is most easily assimilated. Dextri-maltose is the carbohydrate of choice.

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*Eli Lilly and Company, Indianapolis, Indiana.

‡Don Baxter Intravenous Products Corporation, Glenview, Illinois Hospital Liquids, Incorporated, Chicago.

Another desirable formula for initiating feeding is equal parts of evaporated milk and a buffered lactic acid solution which is made twice as strong as the formula given herein.

Drugs do not play an important part in the treatment of diarrheas. Purgatives, excepting in the milder form, serve no purpose. There are many who still believe that opium in the form of paregoric may be useful in relieving pain and allowing the infant an opportunity to rest. Bismuth and chalk mixtures have virtually been abandoned. Caffeine in doses of about 0.1 grain or 1 to 2 minims of a 1:1000 solution of epinephrine may be used as stimulants to combat an acute collapse. The use of the warm bath or the mustard pack is still regarded as the most reliable method to combat excessive hyperpyrexia as well as convulsions.

The diligence with which the several therapeutic measures suggested are applied will, of course, depend entirely on the severity of the symptoms. Frequently there is a tendency to overtreat the sick baby, with the result that it is greatly exhausted. This should be avoided and the value of physical rest should be properly considered. On the other hand, waiting until a precarious situation arises before utilizing some of the more drastic measures is equally harmful. In fact, nothing requires more keen discrimination and poise than the management of diarrheas in the young. Many years ago, in describing these diarrheas, Moro used to stress the three words **toxicose, exsikkose und acidose** (toxicosis, dehydration and acidosis). In no other way can the treatment of these conditions be better summarized.

Diagnosis of Preparalytic Poliomyelitis

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Students of epidemiology have frequently asserted that acute Poliomyelitis outbreaks have greater incidence in the temperate zone and the severity of the epidemics is also much more pronounced. Southern United States has been remarkedly free from outbreaks of the disease until 1935 when the disease made itself felt in North Carolina and Virginia. Both large and small epidemics occurred in the North Atlantic states and New England in 1911, 1916 and 1935. It is quite parodoxical that these thousands of cases exist during the summer months when the temperature approaches that of our Southern climate.

The lay press of the South at this writing has been given a day by day report of new cases and deaths from an acute Poliomyelitis outbreak which apparently had its inception in Alabama. From Alabama, cases have spread rapidly into Mississippi and Tennessee. By now the total number of cases in Alabama is approximately 250, in Mississippi about 30 and in Tennessee about 80 cases. It is interesting to note that in Tennessee there were reported only five cases from January 1st, 1936 to June 27, 1936.

In tracing cases of Infantile Paralysis relatively few can be shown to have contracted their infection from a pre-existing case. Two cases, however, have recently come under our observation in which close contact played an important part. One was a white female aged 15 years, from Alabama with respiratory, pharyngeal and left upper arm paralysis. This patient was placed in the Hammond Respirator for four days before death intervened. A sister of this patient had suffered with Poliomyelitis ten days previously. Another local case illustrating close contact was a white male, aged three years, who had daily intimate contact with a case living next door. This patient similar to the fifteen year old female mentioned above suffered bilateral intercostal paralysis as well as paralysis of the upper and lower extremities. Death followed twenty-four hours after admission to the Isolation Hospital.

The disease is spread for the most part by irreducible contact with the general population. Individual contact with patients or "carriers" unquestionably plays some part in its transmission. This makes imperative the strict isolation of patients. The recommended period by the majority of health departments is approximately three weeks from beginning of the disease. It is obvious that cases or suspected cases should be reported promptly to the local and state health authorities.

The temperature of exposed children should be taken at regular intervals for the disease is probably most infectious at this time.

The average incubation period of Poliomyelitis lies between 7 and 10 days. There are variations from 6 to 20 days but from clinical observation and experimental data the majority of cases usually fall in the 7 to 10 day period.

The diagnosis of Poliomyelitis can be established in a large percentage of cases days prior to the onset of paralysis particularly during an outbreak such as the South is experiencing at the present moment. It is likewise assured that its early recognition offers best conditions for effective treatment with convalescent serum and prophylactic orthopedic measures.

The seasonal distribution of the disease has been mentinoed above. The disease is essentially one of childhood but adults are by no means immune to the disease. Among sixteen patients recently seen fourteen were under ten years of age. A white male twenty-one years old was the only adult in our present small series.

The clinical course of Poliomyelitis may be divided into three stages. The first period represents a general systemic infection, second symptoms of invasion of the central nervous system, particularly the meninges, third impairment of nerve centers of peripheral motor neurons (paralysis). Clinically these stages may occur simultaneous or overlapping. Any one or two of these stages may be so slight and transient that they may be overlooked. If only the systemic stage occurs, the case may be designated as abortive or undeveloped poliomyelitis. Many physicians define all non paralytic cases as abortive.

It must be remembered that symptom free periods may occur between the first and second period. This may last one to seven days. The paralytic stage from the first evidence of weakness to the height of the paralysis may require 2 to 7 days.

The symptoms of the systemic phase include fever usually 101 to 104°F., headaches, nausea and vomiting, constipation more than diarrhea, drowsiness, irritability, especially when disturbed. Flushing of the face has been present in a majority of our cases. Mild or severe congestion of throat and sweating may make up a part of the earlier picture of the disease.

Fever is a most constant feature of the early stage. Remissions of temperature may occur as stated above only to rise again. Draper has applied the term "dromedary" to this type. The pulse has no particular characteristic. Respiratory syndromes include cough, coryza and a sore throat. Older patients may complain of generalized muscular pain so frequently found in grippal conditions. Restlessness may be present during this first stage.

No characteristic diagnostic criterion can be reached during this first stage. Contacts during this first stage with fever and a negative spinal fluid cannot justify a diagnosis of Poliomyelitis. Sufficient serological evidence has accumulated to designate an unchanged cerebrospinal fluid from normal during the first stage. It is well to remember that meningeal irritation is necessary to produce spinal fluid changes.

The second or meningitic period is characterized in the beginning by painful neck and stiffness and pain down the spine. A characteristic picture ensues when the child supports itself when sitting up in bed. This rigidity of the lower spine can always be emphasized by attempting flexion. This will produce severe pain. The arms of the patient will be held rigidly extended to support the spine. In many cases in the beginning of this stage an attempt to raise the shoulder will cause the head to drop back. This head drop has proven to be a valuable aid in early diagnosis.

The general appearance of the patient at this stage is one not easily forgotten by those experienced in handling the disease. The face is flushed and sweating is present in most cases. Fear and apprehension are even present in the majority of small children affected. Drowsiness and stupor should not be overlooked. Hyperesthesia is usually present. This tenderness may be superficial or deep or on motion of the joints. Ataxic tremors and twitching are frequent, especially so if muscular effort is attempted. The Kernig's, Brudzinski and Babinski signs are of no significant clinical value. Retention of urine occasionally occurs.

Lumbar puncture is now of distinct value in corroborating preparalytic poliomyelitis. The spinal fluid is usually clear and colorless. A faint haziness is sometimes present. The pressure is of no significant value. The most constant and reliable findings is the increase of spinal fluid cells. The usual range is from 40 to 100. Lower limit of cells may be 12. The high limit of cell increase may number 1000 to 5000. Lymphocytes are the predominating cell. Occasionly very early neutraphilic polymorphonuclear cells may be increased only to be succeeded by the lymphocytes. The sugar and chloride content of the spinal fluid is of no practical significance in the diagnosis. The usual amount of sugar (mg. per 100 cc.) is 40-80. The chloride 650—700 (mg. per 100 cc.). Cell count should be counted promptly on withdrawal, preferably at the bed side.

The above spinal fluid findings are of value in excluding other conditions. In Encephalitis the cell count too may be high. The sugar content is frequently more elevated in Encephalitis. One of the most valuable points in differentiating an encephalitis is the drowsy or stuporous condition of the patient. Post infectious Encephalitis following measles and mumps should be kept in mind. The patient with poliomyelitis is usually very alert and well oriented.

Tuberculous meningitis may give a history of exposure and be of slow development. The spinal fluid sugar is decreased or absent.

In Luetic meningitis the Kahn and Kline reaction or a family history of lues or other stigmata of congenital will rule out poliomyelitis. All forms of pyogenic meningitis may be excluded by smears, cultures or quantitative sugar tests.

SUMMARY

The clinical recognition of poliomyelitis in the preparalytic period is essential that early treatment be established whether it be rest in bed, gentle corrective orthopedic treatment, spinal drainage relief, or use of convalescent sera. From a public health standpoint it enables immediate isolation of the patient. The diagnosis is all too often made in the paralytic stage.

Epidemiologic evidence of the past indicates that the disease may be expected with frequency during the months of July, August, September and October. No longer must poliomyelitis be considered a sectional disease.

Poliomyelitis begins with symptoms of a systemic infection principally headache, nausea, vomiting, fever. This is followed by the principal diagnostic signs stiffness of the neck, rigidity of the spine, and ataxic tremor of the upper and lower extremities. The clinical differentiation from other possibilities must be eliminated.

The serological diagnosis by examination of the spinal fluid concludes the picture. The average cell count increase is from 40—100 cells, with lymphocytes predominating.

20 S. Dunlap.

Diagnosing Acute Anterio Poliomyelitis in the Field

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When yellow fever was being brought under control one of the measures that contributed to the end desired was an agreement among the several interested State Boards of Health to report suspicious cases to the public and to each other. They first agreed on the symptoms of yellow fever. Next they agreed to inform each other whenever three or more of these symptoms were present in the same individual. The diagnosis was agreed on as one of suspected yellow fever—a suspicious case. This agreement restored confidence of the several State Boards in each other and of even greater consequence it calmed the fears of the people. They lost their fear of hidden cases and in great measure of missed cases.

At the time yellow fever was being banished from the United States all that was known of the disease had been learned by ordinary clinical observation. None of the what are ordinarily called scientific discoveries had been made. All of the methods of control were rule-of-thumb. We now know that many of them were useless. Nevertheless the shot gun combination worked. Since 1880 there has been no worth while epidemic of yellow fever in the United States and this was just twenty years prior to the application of the mosquito theory to the control of the disease.

Reporting on suspicion is a valuable means of fighting any disease about which not much is known and as to which there are inadequate means of laboratory diagnosis and specific treatment.

These are the conditions that exist as to acute anterior poliomyelitis and incorporating "suspected infantile paralysis" in the program of control should prove helpful in treating the disease clinically and epidemiologically.

The bulk of opinion is that most of the cases are due to contact with some variety of carrier or with a missed case. Recognition of a class designated as suspected "infantile paralysis" will not materially help the carrier situation but it should materially lessen the number of "missed" cases.

From the standpoint of certain diagnosis the best symptom of the disease is that form of loss of muscle power that goes by the name of paralysis. However, the use of the word paralysis is apt to make the physician look for more weakness than the case presents.

Waddell reports that in the Virginia epidemic of 1935 fifty-one per cent of the cases gave paralysis as a symptom presumably at the time the diagnosis was made. But in Charlottesville the paralysis rate was 14% while in the state outside of Charlottesville it was 72%. This can only mean that outside of Charlottesville physicians seldom made the diagnosis without paralysis.

Nicholson in an analysis of the Kentucky epidemic of 1935 reports paralysis as the basis of diagnosis in 82% of cases. Root in reporting the North Carolina epidemic said there were eight cases which did not show paralysis for every one that did.

If Root's opinion is correct paralysis falls from its position at the head of the list of symptoms. It is present in only about twelve per cent of cases. If so the diagnosis that waits on paralysis is not only a late one but it is an ineffective one. It results in a large number of missed cases.

In Nicholson's analysis the symptoms rate in frequency as follows:

Fever 90%
Stiffness of Neck 81%
Headache 76%
Rigidity of Spine 67%
Backache 50%
Vomiting 50%
Coryza 24%
Drowsiness 22%
Constipation 9%
Muscle Pain 13%
Tremor 8%
Kering 3%.
Diarrhoea 1%

Waddell's rating was:

Headache 75%
Vomiting 50%
Fever 54%
Exaggerated reflexes 48%
Pain and Stiffness in Neck 38%
Muscle Weakness 22%
Pain in Abdomen 18%
Drowsiness 13%
Diarrhoea 9%
Nausea 6%
Dizziness 1.8%
Coryza 1.8%
Convulsions 18%

Holliday in reporting the Maryland epidemic said two-thirds of the cases were paralyzed and he adds sore throat to the list of frequently encountered symptoms.

There are very few diseases in which there is any one symptom present in one hundred per cent of the cases. Nevertheless the variation in the frequency of different symptoms in infantile paralysis is rather striking. Some part of this is the result of variation in the point of attack or points of attack in the nervous system. This is especially true of the symptom paralysis where we note in the figures given a variation from one case in eight to 72%. In many cases, probably a majority, the virus either fails to reach the motor cells in the anterior horn of the spinal cord or reaches them in less dose than is required to cause destruction of the cells.

The progress of the disease clinically, and possibly anatomically, can be divided into several stages. We gain in diagnostic possibilities if we think of these stages separately and look for certain symptoms in the stage where it is most frequently encountered.

The virus after entering the nose travels up the olfactory nerve to the olfactory bulb, tends to pass by the brain properly speaking and to travel down the brain stem and cord to reach the motor cells in the anterior horns. It is apt to do some damage at every level but it reserves its destructive action for those motor cells. It may be arrested at any stage of its journey and if so the symptoms caused by injury to the escaped areas will be escaped. The first stage is that in which the virus gets into the nose and is established there but travels no further. About this stage we know next to nothing. The supposition is that many effective carriers belong in this group.

But since we can not diagnose nor treat this group nothing is gained by discussing this stage further at this time. Individuals in contact or recently in contact with cases are charged with spreading infantile paralysis. The only basis we now have for this group—that is every day working basis—is a history of somewhat intimate exposure.

The second stage is more important from the diagnostic standpoint. The symptoms of this stage are headache, fever, convulsions, nausea, constipation, diarrhoea, coryza, sore throat. There is nothing very distinctive about any one or all of these symptoms. There are the symptoms of several diseases some of minor importance. But there may be something peculiar about the symptoms and particularly the combinations in infantile paralysis. A digestive upset with coryza and sore throat is not often encountered in other diseases and diarrhoea or vomiting with fever may be a combination that causes suspicion and provokes more careful study. The history of infantile paralysis near by of possible exposure and of the above symptoms in unusual association or something in appearance or behavior that is out of the ordinary should make a diagnosis of suspected infantile paralysis possible in a fair portion of cases. Such a combination will often lead to mistaken diagnosis, it should also be said.

The third stage is much more important from the diagnostic standpoint. It is the stage of irritability.

The symptoms sometimes present in the stage are fever, stiffness of the neck and back, muscle tenderness, irregular skin tenderness, irregular distributions of heat and of redness or blanching and other symptoms of vasomotor irritability. Irritability of the brain or its opposite drowsiness, careful observation of the fever from the onset shows it to be of the "swayback" type—a type on which many physicians have made diagnosis of smallpox when that disease has been prevalent. The most striking manifestation of the irritability is the unwillingness of the child to be held in the mother's lap or to be fondled, petted or rubbed by the mother.

Taking the community and the case history into consideration along with more or less of the above group of symptoms, a diagnosis of "suspected infantile paralysis" can be made in large proportion of the cases and a definite diagnosis of infantile paralysis in a respectable minority.

The fourth stage, that of paralysis, is the one in which diagnoses are usually made. The diagnosis should be an easy one provided the approach is right. In making the examination the doctor should have in mind motor weakness usually limited to a rather small area and having preference for certain muscles. The motor weakness, at first almost unnoticeable, is progressive for a few days. However, it must be confessed that many diagnoses are made on a complaint of "toe drop," a "foot drag" with a history of a preceding "flu" or "stomach upset." The paralysis due to toxic neuritis, post diphtheretic or other, is much more apt to appear suddenly in a completed picture.

In the fourth stage we are not surprised when we fail to find those symptoms which characterize the stage of irritability.

The fifth stage—that of muscle wasting is of least importance from our standpoint. The most important injunction to the diagnostician is that he approach his patient with a proper conception of the stages of progress of wasting. He wants to make a diagnosis before wasting can be recognized by the lay observer. He will first notice that the weakened muscles are flaccid rather than rigid, that exaggerated reflexes have given way to lessened reflexes. Next he will notice when comparing the two limbs that there is some change in contour. Finally any one can see that there is muscle wasting.

Practically speaking, laboratory examinations of muscles are virtually without value under field conditions, in the present state of the art.

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Orthopedic Treatment of Early Poliomyelitis

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With the poliomyelitis that is present in the state, each of us is being asked many questions as to the prophylaxis, treatment and prognosis of this disease. This is a timely occasion to refresh our memories on the orthopedic treatment of this disorder and this paper will be limited to that.

The early care of the paralyzed muscles is of the greatest importance. Many of the unfortunate disabilities and deformities that result from this disease are due to the lack of the proper care in the early stages. Unaffected muscles have been allowed to contract and weakened muscles to stretch. The weakened muscles then lose their recuperating power, which they otherwise would have had if they had been held at rest in a relaxed position.

Any paralyzed muscle should be placed at absolute enforced rest in a relaxed position as soon as beginning paralysis is noted. The best procedure to follow is to place the patient on a hard surface bed, which has been prepared by placing boards on top of the springs beneath the mattress. Do not use an inner spring mattress, as this will defeat the purpose of the firm surface. There is no way of knowing which muscles will become paralyzed, so it is best to rest all of them as best possible. Preventing the sag in the ordinary bed will greatly stabilize the spine and pelvis. Many cases of scoliosis, which are first noted at puberty, are in all probability due to an unrecognized and untreated poliomyelitis infection in earlier childhood. Any muscle or group of muscles may be involved, but the usual order of frequency is, both lower extremities, one lower extremity and all extremities.

When any paralysis of the lower leg is noted, absolute enforced rest of that part should immediately be instituted. The foot should be held at a right angle to the leg. The best method for this is to apply a light plaster of paris cast extending from the base of the toes to just below the knee. If plaster is not convenient, an ordinary aluminum or wire ankle splint is satisfactory, if well padded.

There are many patients who will not tolerate a splint well, so that it is necessary to make long slender bags and fill them with sand. These sand bags can be comfortably molded about the affected part to hold the foot up in its position of choice. Right angle splints can be nicely made from soft boards such as orange crates are made from. These can be bent or cut to form a capital L and held fairly rigid by small wooden or wire reinforcements. When padded well with cotton and bandaged snugly to an extremity, this makes a nice right angle splint to wear while in bed. A splint has an advantage over sand bags, in that the patient can change the position of the body without losing the support to the affected part. Supports not only prevent deformity, but add greatly to the comfort of the patient by the protection they offer.

If the thigh is involved the position of choice is to hold the knee extended. This can easily be done by simply applying any type of straight splint or board to the back of the thigh and leg, binding it snugly. It is best in such cases to include the foot, which must be held at a right angle to the leg. Be sure and pad the splint well to prevent skin irritation from pressure. In cases where the muscles about the hips are showing paralysis or weakness, the ideal treatment is to apply a snug fitting spica cast from the nipple line to the base of the toes, holding the hip in very slight abduction and preventing any internal or external rotation. A cast may be difficult to apply, but if a Thomas splint is handy, it may be used to advantage. Be certain that the ring of the splint is pushed well up against the ischium, and adhesive strips hold the leg firmly in place. Another type of splint that is extremely satisfactory is to take a light board that will reach from the axilla to the foot and bind it snugly to the patient's side. This will prevent flexion, extension, abduction, adduction and rotation. In addition it holds the knee in the desired position of extension. The chief fault with this splint is that it will soon cause pressure sores over the bony prominences, such as the crest of the ilium, greater trochanter and bony regions about the outer ankle. Most of this can be prevented by proper padding. Of course, sand bags can be placed on both sides of the thigh, but this is not as desirable as the splints.

The wrist is not very frequently involved. Here the position of choice is moderate dorsiflexion. Again a properly applied cast is the splint of choice, if available. Most of the metal wrist splints are made for Colles fractures and hold the joint in moderate palmar flexion instead of dorsiflexion. If these splints can not be bent so as to cock-up the wrist, then it is best not to use them. A simple anterior board splint can be easily prepared by strapping an empty ether can to one end of it and applying a little padding over the splint and can. The can, if placed in the palm, will hold the wrist in an excellent position when the splint is bound to the forearm. It will add greatly to the patient's comfort, if this splint does not extend quite to the elbow.

The best position for the elbow is ninety degrees flexion. It is best to hold this position by some type of rigid right angle splint. Most any light weight metal or wooden splint can be devised to do this job. An ordinary sling about the neck will do, but this is not very confortable while in bed and it is very frequently necessary to combine holding up the wrist and flexing the elbow at the same time, and this, a sling can not do.

Last is the shoulder region. Here the best results can be expected if the arm is abducted to a right angle from the body with the forearm pointing forward. For instance, if the patient rests in bed on his back, the forearm should point straight to the ceiling. An abduction humerus or aeroplane splint is excellent for this purpose. If this can not be obtained, it may be possible to stack pillows or sand bags in such a manner as to hold the arm in abduction with the forearm forward. The humerus splints that hold the arm abducted, but with the forearm pointing down, are to be condemned because of the downward rotation of the shoulder. Do not allow these patients simply to carry the arm in a sling as this allows the deltoid muscle to be overstretched and it may never have a return of function for that reason alone.

If there is multiple involvement, it may be necessary to use a combination of the above positions to assure the proper rest for the paralyzed parts during the acute and subacute stages of the disease. This usually covers a period of four to six weeks.

In the early stages of this disease, massage, baking, diathermy, electrical stimulations and all types of exercises are to be condemned. The main treatment is rest of the involved muscles. These must be held in a relaxed position, so that the unaffected muscles which oppose them will place no strain on them. Any massage, stimulation or exercise will interrupt the benefit that is being obtained and will decrease the possibility of a good result. In fact, their use may cause extensive and permanent damage.

At the end of four to six weeks the recuperative stage of the disease begins. It lasts from a few months to several years. It is during this part of the illness that the artificial methods of assisting in the return of function are employed. The supporting appliances are to be removed at the end of five to six weeks and the patient allowed to remain without support during the day, but each night they are to be re-applied. This should be done for many months where restoration of function is slow. This is simple to do with splints, and if a cast has been applied, it can be split along each side so as to form a front and back half. These can easily be removed each morning and re-applied at night and held in place with bandage or adhesive plaster strips. Massage can be instituted at this time. Liniments and ointments will give no relief. Cold cream should be used during massage. It prevents skin irritation and it can be obtained cheaply at any ten-cent store. This simply lessens friction and saves the skin. Rubbing alcohol applied after massage will help toughen the skin. The massage should begin with gentle stroking and it is best to stroke always toward the heart. Gradually the massage can become stronger and the affected muscles gently rolled or kneaded between the fingers. Baking and diathermy are at this time indicated. It is best to apply these before or during the massage.

Voluntary and passive motion are encouraged during the recuperative stage. Weight-bearing must be very cautious, so as not to strain the new strength that is returning to the muscles. Exercise under water is one of the best methods available. Many muscles can be built up in water that would otherwise be totally lost.

During the recuperative stage is the time that the deformities develop. Practically all deformities can be prevented by proper bracing during this period. Even if the paralysis is widespread and the deformities are extensive, these patients are not beyond redemption. There are many orthopedic procedures which can greatly improve appearance and function, such as, tendon lengthenings, tendon transplants, and corrective bone operations of many types. However, the treatment of choice is to prevent the deformities rather than attempt to cure them.

Yellow Fever In Mississippi 1878-1905

HARRIS ALLEN GANT, M.D.
Columbia, Tenn.

CHAPTER III

BILOXI, AND TOWNS ON THE MISSISSIPPI COAST—1897

Beginning September the 11th, I took up the work at Biloxi with Dr. H. H. Haralson, assisted by Drs. J. R. Tackett, H. M. Folkes, and W. T. Bolton, local physicians. I was really glad to come to this town, so noted in romance and history, famous for its soft, balmy atmosphere and cool gulf breeze. To me, "a land lubber," the scenery was most interesting. I never tired of driving along the beach. The long drives, shaded on each side by the majestic live and water oaks, dressed in long hanging gray moss, give one a pleasant thrill, not to be surpassed by any scenery elsewhere. It was restful watching the white caps sparkling in the sunlight in the day time, as they came dancing in from the gulf, and at night listening to the lapping of the waves as they struck the shore at Biloxi. I remember distinctly the old lighthouse which had lost its perfect perpendicular position, and reminded me of the leaning tower of Pisa, for it looked as if it might fall at any time. I wonder if that old light house is still standing. I know that the town has grown into a great city, and has become practically a suburb of New Orleans. It is well supplied with splendid hotels, immense stores, great canning factories, and all the modern improvements, and has the ways of a great city. Biloxi is indeed a famous place, full of historic interest. It was here the French, under the D'Iberville first settled on Mississippi soil, and it was here, or near this place at Fort Maurepas, the first case of yellow fever, recorded in Mississippi, occurred in 1701. The disease in after years was a frequent visitor, not only in Biloxi, but in most of the other towns along the coast.

Of our work in this town, and along the coast, a joint report of Haralson and myself, gives the details, as follows:

"The first thing done by us was to place a cordon of guards through and around the town. Dr. Haralson, a few days before, had diagnosed three cases of yellow fever in the extreme eastern portion of the city. At the time we took charge there were at least twenty foci of infection, which, although, not known at the time, was subsequently shown to be true. There was, however, a section in the western portion of the city extending one mile along the beach and one mile north and south with a population of nearly a thousand that was not infected. In placing our cordon we arranged it so that this portion of the city was cut off from the infected portion. Our action in this matter was criticized somewhat by the press and on this account we had some trouble maintaining an effective line. By establishing this line dividing the infected from the non-infected portion of the city we succeeded in holding the disease in abeyance until very late in the season when the disease had become very much milder. For thirty days or more the disease was within a few yards of the line. It finally found its way across, exactly how we do not know, but by a system of house guards we succeeded in still further checking it, not having more than fifteen cases on the western side until November 15th, when the line was removed.

We did not have a single death from the fever on the protected side of the line. These good results were obtained notwithstanding the fact that the cemetery was within these limits, to which all those dying from the fever were brought and in which they were buried. Besides this we issued permits of departure and certificates of health to parties from this section of the city, and to parties adjacent thereto in quarantine to the number of five hundred. These parties went into almost every State of the South and not a single case of yellow fever developed from any of them. This is a point well worthy of consideration, for it is a conclusive demonstration of the fact that people can be sent from stricken towns and their vicinity without the least danger to communities where they go.

On September 13th we promulgated the following rules, and regulations:

"Rule 1. A strict quarantine is hereby declared in the city of Biloxi, Harrison County, Mississippi, and no person shall enter or leave said city without a written permission of the Mississippi State Board of Health.

"Rule 2. There is established in the city of Biloxi a quarantine line, which said line runs from a point on the front or beach, in northerly direction between the Sanitarium and the residence of Mrs. Barie, to Back Bay, and thence around said city limits to starting point; and guards shall be placed on and along said line.

"Rule 3. No person shall cross said quarantine line in either direction without the written permission of the State Board of Health; provided, this rule does not prevent parties from going to their fishing grounds and back to Biloxi.

"Rule 4. No cloth goods of any kind shall be permitted across said quarantine line without thorough fumigation, nor shall any mail of any sort or newspapers, be permitted to cross said line without fumigation.

"Rule 5. No provisions or thing of any kind shall be permitted to cross said quarantine line, which comes from any house in which there is or has been any case of yellow fever, until such time as the Board determines otherwise.

"Rule 6. All practicing physicians in the city of Biloxi are required to report to the office of the State Board of Health, in the city of Biloxi, by seven o'clock p. m. of each day, all cases of yellow fever seen or treated by them during the twenty-four hours preceding, or any suspicious case of fever so treated by them.

"Rule 7. That a yellow flag shall be displayed at any residence or place, when, in the opinion of said Board, it shall be deemed necessary.

"Rule 8. No train, cars or locomotive, carrying passengers, shall stop or come to a halt in the city of Biloxi without the permission of the said Board.

"Rule 9. Guards must watch not only their immediate posts but must keep a watchful eye on all crossings, but must not wander from their immediate posts.

"Rule 10. Guards failing to do their full duty will be punished according to the offense committed or duty neglected.

"Rule 11. Permits must not be honored by the guards when said permit is more than twenty-four hours old.

"Rule 12. The above rules are made because of the prevalence of yellow fever in the city of Biloxi, and will be rigidly enforced while the State Board of Health has charge of said city of Biloxi, and any violation of said rules will be prosecuted and punished to the full extent of the law. H. A. Gant, and H. H. Haralson have full authority to act for the Board in the enforcement of these rules.

"J. F. HUNTER
"H. H. HARALSON
"W. G. KIGER
"Executive Committee State
Board of Health."

Besides these we had a regulation limiting the number attending funerals, and also, regulations governing the interment of those dying of yellow fever. Two men were employed by us and paid by the city to take charge of all remains as soon as a death was announced. The remains were wrapped in a sheet saturated in bichloride solution, 1 to 500, and placed in coffin, which was sprinkled with a solution of the same strength. As soon as practicable after death, usually from four to six hours, they were buried.

In our efforts to check the spread of the disease in Biloxi, invaluable assistance was rendered by the mayor and city council. These authorities not only gave us their moral support, but aided in the enforcement of regulations in a financial way. An ordinance was passed by the council prohibiting any person to remain on the streets after nine o'clock at night, under penalty of imprisonment and fine. Although this ordinance met with considerable opposition, it was rigidly enforced by the authorities. This council also adopted an ordinance requiring, under penalty, all practicing physicians to report at least once a day, all cases of contagious or suspicious fever coming under their observation to us, and when such cases were reported, the families which they were in were quarantined at once. This house quarantine was maintained for several weeks, and did a great deal of good in the way of checking the spread of the disease. The guards employed in the maintenance were paid by the city council.

A process of fumigation and disinfection was inaugurated. A part of the expenses of this work was also borne by the city. We furnished one man and the material and the city furnished one man, and the wagon and team.

The work was directed by Dr. H. M. Folkes, who was in the regular employment of the State Board of Health. This work embraced the fumigation of infected houses and the improvement of sanitary condition of all others needing such. The expenses of the latter was paid by owners or proprietors of the houses.

Seeing that the fleet in Ship Island harbor was in great danger of becoming infected from Biloxi, as it was holding uninterrupted communication with that city, we requested the supervising Surgeon General of the Marine Hospital to undertake the prevention of its infection. He replied that he would pay the physician to supervise the work at $150.00 per month, and two boatmen at $40.00 per month each, provided we would name them and furnish a boat. We agreed to this and placed Dr. C. A. Sheely of Perkinston, who had recently recovered from the fever, in charge of the work. Having our transfer boat on hand, which we had rented for the season, we placed it at his disposal. On September 23 we issued the following rules and regulations governing the same.

Mississippi Coast Quarantine,
Biloxi, and Ocean Springs, Miss., Sept. 23, 1897

RULES TO GOVERN THE LOADING FLEET AT SHIP ISLAND, MISS., FOR REMAINDER OF QUARANTINE SEASON 1897.

Stevedores' crews shall spend five days in camp on Ship Island, or on vessels in quarantine before going on board loading vessels, providing there has been no sickness on the vessel on which they worked. In case of sickness on board, five days must be passed on the island or in quarantine.

Pilots shall not board vessels coming in except in case of necessity. In case of vessels going out they must not go below.

Masters and members of crews arriving at their vessels from infected points, shall have their clothing and baggage fumigated before going aboard.

The masters and crews of tugs and supply boats shall under no circumstances go aboard any vessel in Ship Island Harbor.

No master of any tug or supply boat shall allow any person to board his boat in Ship Island Harbor.

No master of any tug or supply boat shall allow any person to board his boat in Ship Island Harbor without permission from the quarantine officer except in cases of urgent necessity.

Masters and mates of vessels in Ship Island Harbor shall not allow any person to go aboard their vessels except by permission of the quarantine officer.

Masters and crews of ballast lighters shall not board vessels which they are discharging.

The Harbor Master shall not go on board vessels except on duty, in which case he shall not go below. His deputies must be immune and while discharging ballast shall remain on board, and before going on board shall have their clothing fumigated.

All orders from vessels, except provisions, shall be approved by the quarantine officer, or by the Mississippi State Board, in Biloxi.

Willful violation of these rules will be punished under the laws of Mississippi and the Acts of Congress governing quarantines.

All complaints and controversies should be referred to P. A. Surgeon, A. C. Smith, M. H. S. in command of Gulf Quarantine.

H. H. HARALSON, M.D.
H. A. GANT, M.D.
For Miss. State Board of Health

R. D. MURRAY, Surg. M. H. S.
Agent Miss. Board of Health for
Jackson County, Miss.

We had considerable trouble trying to control the people. They were not afraid of yellow fever for they were accustomed to it, and many of them immune. They said they preferred the fever to quarantine. They resented any interference with their business, and would not obey regulations.

I remember very distinctly one night I was alone in our office, Haralson had gone to see some patients when a half dozen or more fishermen, shrimpers, as they were called, came up to our office and asked for Haralson. One of them said, "We have come to see about this quarantine matter, the canning factory is closed and we are thrown out of work. Our families are starving, and we are going to have something done about it." And they looked like they meant it. I knew they felt more resentment against Haralson than against me because he was the local man, and they thought he was responsible for all their trouble, so I played for time. I stood up in the corner, and made as strong a talk as I knew how to pacify them. I told them the state Board of Health did not wish to put any unnecessary hardship on them, but that it was necessary to prevent people from Biloxi, an infected town, going to different places, because yellow fever carried away from its habitat was much more fatal than where people were accustomed to it, and if it gained entrance into the interior of Mississippi, it would be very fatal. They said, "Damn the interior of Mississippi, we don't care for yellow fever, and we are not going to stand this interference with our business, when our wives and children are suffering."

I then told them that I would do everything in my power to relieve the situation and would hold a conference early next morning with Mayor Howard, Haralson, and others, and see if we could not modify the regulations so as to permit them to go out in their boats fishing, and back with their catch. I saw the hall outside the door was crowded with these fierce looking men, and I asked how many there were. The reply was, "There are about fifty down on the sidewalk, and five hundred down on Back Bay." Remembering that Dr. Joseph Holt, of New Orleans, as I was informed, some years before had been threatened with death, and driven out of Biloxi by boat to New Orleans, because he had pronounced yellow fever there, I felt more and more the necessity of getting rid of that crowd before Haralson returned to the office. Fortunately they agreed to go down, and home and back the next morning. In a few minutes they left, Haralson came in, and after consultation, we arranged for the conference the next morning, and went home. Before we retired Haralson was called to the telephone, and told that he had better not go down town next day—that the feeling was so bitter it would not be safe. However, the next morning we got in our buggy and drove along the beach until we came to the street leading from the beach up to our office. We saw quite a crowd in the street near the office and Haralson said, "Gant, shall we go up there?" After some hesitation, I said, "Yes." He said, "All right," but I noticed he opened his obstetric case in which he had his pistol. Arriving at the office, the crowd permitted us to pass up, without molestation, and soon our lawyer, Colonel Neville and Harry Howard, the Mayor, came in and we agreed upon certain modifications in our regulations. That pacified the shrimpers I relate this incident to show how difficult it is to enforce quarantine, especially along the Mississippi coast where they had been having yellow fever at different times for many years.

Colonel J. H. Neville was our legal adviser. He was very much afraid of having yellow fever because he was the subject of some kind of kidney trouble. He was outside our first quarantine line. Soon the fever crossed over that line, and he moved still further out, but in a few days had to move again. Nearly every day, he would call us up over the 'phone, and ask about the situation. I remember one morning when perhaps I had lost more sleep than usual, and was rather irritable—I got it into my head that I would have a little fun when the Colonel called on me. So when he asked how many deaths there were the night before, I told him that there had been two deaths. Then he asked me how many cases, and I told him there were at least six or eight new cases. He asked me how about one of his friends, Mr. Gill, I said, "Well, Gill is dying." He then said, "Doctor, had I not better move again?" I replied, "Yes, I think you had, Colonel." He said, "Well, where shall I go?" I said, "I don't know, unless you climb a tree." This provoked him, and he gave me a good scolding, which I took good naturedly. But in a few days, the following incident occurred. I was in the office early one morning, when one of the old women, dressed all in black, with a long black bonnet on, came in and asked, "Are you one of the State Doctors?" I said, "Yes." She asked, "Where is Dr. Haralson?" and I replied, "He is out, making a visit, seeing the sick." She said, "I want you to go and see a patient." I said, "No, Dr. Haralson is seeing patients, he is the local doctor, and I am here representing the State, looking after the handling of yellow fever." She said, "Well I want you to go." Seeing that I could not induce her to wait for Dr. Haralson I said, "Where is your patient?" She said, "Right down the street." I said, "All right, Madam," and followed her down the stairs, and to the corner of the next block, when she turned into a little fruit stand, and stopped. I looked around, and saw several men standing around, and sitting on the counter. I supposed she was going to take me upstairs to see the patient, but when she did not make any start in that direction, I said, "Well, Madam, where is your patient?" And she waved her hand at a pile of cabbage, and said, "There is your patient, and there is your patient (waving her hand toward a bunch of bananas), and there is your patient, (waving her hand at a collection of fruit, apples, oranges, etc.) "Why," I said, "Madam, I do not understand you, what do you mean?" She said, "I mean that you have ruined our fruit—our business, by your disinfectants, and we must have pay for it, and if you don't pay us, the men will see you." I said, "Well, Madam, this fruit was disinfected in New Orleans, before it was brought here, under the regulations of the General Government, and we have nothing to do with it." She replied that we represented the State and the State would have to pay them. I said, "This is under Dr. Carter's management, in New Orleans, and I will communicate with him, and I am sure he will satisfy you about the damage done."

The fruit was much blackened and damaged. I then left and called up Colonel Neville, and told him all about it, and he took the matter up with Carter. Carter arranged it, but to get even with me, Neville told the incident as a joke on me, whenever he met me in a crowd, as long as I remained in Mississippi. He said that the old woman in the black bonnet, and the men standing around frightened me, and that I had gone to him in great anxiety.

Although we had much opposition in carrying out our regulations, we managed to prevent the fever from gaining any considerable progress in certain portions of the city. The Mayor, Harry Howard, Colonel Neville, Judge White, Mr. Lopez, Mr. Dukats, and the leading citizens generally endorsed our action and helped us to the extent of their ability. The hardships fell particularly on the canning factories, of which there were quite a number. The Barataria, (the only name that occurs to me at this moment) and several others were doing a large business, and were shut down, at a great loss. Dr. H. M. Folkes and Dr. J. R. Tackett, local physicians, worked faithfully and unceasingly visiting the sick, and helping us in every way possible. Dr. Folkes' services were so much apprciated that he was made one of the local inspectors the next year for the coast towns. Dr. Tackett was non-immune and went until almost the close of the epidemic before he became infected. He was many, many times exposed from early September until about the middle of October, and I have never been able to understand why he escaped so long, for I remember one case, a most malignant one, a Swede, who could not speak English, who was suffering with hemorrhage of the nose. He lived in a little cottage right on the beach, and one hot, hot afternoon, Haralson, Folkes and I all went to see him, and endeavored to plug his hares. He was uncontrollable, delirious, and could not understand a word we said. In our efforts to check the bleeding, our hands were freely smeared with blood. The mosquitoes were swarming, thick clouds of them in the room, and we could not prevent them from biting us. Yet it was weeks after this before Tackett was taken down.

It was during this service in Biloxi, that I had instructions to go to McHenry, a small town on the Gulf and Ship Island Railroad. I was unable to secure a train from the L. & N. Railroad to Gulfport, but was furnished a hand car, and four stout negro men, who ran me down thirteen miles to that place, where I caught a train to McHenry. I saw the patient, found he had yellow fever, and returned to Gulfport, boarded a hand car, and started back to Biloxi. About the time I was passing Beauvoir, the former home of President Jefferson Davis, and now the home of the Ex-Confederate Veterans, I was halted by a gruff, stout Dutchman, standing in the middle of the track, with a double barrel shotgun. He told me that I could not go across the county line. I told him that I was a State Health Officer, and that it was my privilege and duty to go wherever I was called, that there was no danger in me, and that there was already fever in Biloxi, and therefore no necessity of keeping me out of that county. He replied that he had orders from Sheriff Hughes not to let anyone pass. I tried to argue the question with him, and finally told my negroes to start on, but immediately the Dutchman levelled his gun, and I ordered my negroes to stop. The upshot of this was that I had to run back to Gulfport, and get the permission of Sheriff Hughes to return to Biloxi. Discretion versus valor.

At the close of this epidemic, citizens of Biloxi in appreciation of the services of the representatives of that State Board of Health, and Doctors Tackett, and Folkes, held a meeting and presented us with testimonials and resolutions of thanks for our services. They gave Haralson a watch, and me a very handsome gold headed cane, and Tackett and Folkes each an appropriate gift, just what, I do not recall now.

These were very active days for Surgeon H. R. Carter. He was probably the busiest man in the South, for he had to look after passenger travel, freight shipments, securing of guards and inspections for trains out of New Orleans, fumigation and disinfection of letters, papers and every kind of goods. The regulations were most rigid in the states adjacent to New Orleans, and the Mississippi Coast. And Carter was the ruling genius in managing the entire situation. He seemed to be almost ubiquitous, and yet he seemed never to be tired, and could be had at any time when and where needed. It was a very difficult business, to coordinate the rules and regulations governing the quarantine and shipment of goods, by various towns and counties and states. Some would admit one class of goods, others prohibit the same class, and still others would not permit anything to come in that was shipped from New Orleans.

It was said that Texas prohibited the shipment from New Orleans of silver dollars fresh from the United States mint. But I do not know whether that was a true statement or merely a rumor. I do know that Dr. Carter was very much overworked, and that at the close of the epidemic, he was attacked by yellow fever, and immunized in New Orleans, making a perfectly satisfactory recovery from a typical mild attack. Drs. Haralson, Tackett, Bolton and Folkes were all immunized before the close of the epidemic at Biloxi.

In an estimated population of Biloxi, during the epidemic of about 5,000 people, there were 650 cases of yellow fever, and 35 deaths.

The real origin of the fever in Biloxi as well as in Ocean Springs, was never definitely determined. When Haralson, Tackett and Tebo announced yellow fever of the 9th of September, and Drs. Carter, Murray and I were called over from Ocean Springs, and concurred in their diagnosis in the Borsage cases, there were already many other cases in the town. And in Ocean Springs as has already been fully described, the fever was prevalent throughout the town, long before the final decision was made in regard to it, as agreed upon after the autopsy on the body of Mr. Seymour.

Dr. Haralson always contended that both towns were infected through Ship Island Quarantine Station, but I have never fully agreed to that opinion, being convinced that yellow fever had prevailed in New Orleans all through the months of June, July and August, and that it, as usual, was concealed by the Health authorities, as long as possible, and permitted to get into the Mississippi towns. It was a great pity that Edwards, Raymond, Clinton, Cayuga, and Nitta Yuma became infected because of the lateness of the knowledge of the existence of the fever in New Orleans, along the coast of Mississippi, and especially at Ocean Springs. The fever also occurred at other towns, for instance, Scranton, Berkley, Bay St. Louis, Perkinston, along the coast, and at McHenry, 25 miles north of Gulfport, on the Gulf and Ship Island R. R. At the last mentioned place, there were 57 cases, and 8 deaths.

In October, about the first of the month, Dr. Haralson and I had a message from Dr. Hunter, to come to Jackson at once, to have a conference with him and Dr. Kiger, about quarantine matters. The L. & N. R. R. furnished us a train to New Orleans, and the I. C. R. R. ran us up to Jackson at night, where we met Hunter and Kiger, and after a long conference returned to Biloxi. It was never known that we had left that place. The weather was getting cool, and I shall never forget how disagreeable it was as we sat around a fire that had been kindled by Hunter and Kiger near the asylum switch at Jackson, and talked over the situation. We considered ourselves very fortunate to be able to make that trip, for if it had been known that we were running through the country, we probably would have been quarantined.

We had a killing frost about the 15th of November, and on the 17th all quarantine was declared off, and the epidemic of 1897 ended, and I returned to my home in Water Valley.

In December, Governor A. J. McLaurin appointed Haralson, Dunn, Purnell, Tackett, Folkes and me a commission to visit Cuba, especially the city of Havana, to investigate conditions there, as regards the possibility of infection of Mississippi from that point. So, late in December, Tackett, Folkes and I sailed from New Orleans for that point. Purnell, Haralson and Dunn were not able to go. We went by way of Key West. Leaving that place late in the evening, we found ourselves the next morning, just outside the harbor of Havana. Our vessel had been halted because of the turbulent conditions of the citizens, and the imminence of war with Spain. There had been a chain stretched across the harbor which was some three or four hundred yards wide, just under the guns of Moro Castle, and no vessels were permitted to enter during the night. The next morning we were landed, and went to Hotel Ingleterra, on the Prado. During the day, we called on General Fitzhugh Lee, and presented our credentials. He told us he would make our stay as pleasant as possible, but that there was great excitement in Cuba at that time, and a man had been killed on the street just under the window of our room at the hotel the night before, and a printing office in the city had been demolished just a day or two before. However, we got in touch with Dr. Burgess, the health officer in Havana, who took us in his launch all around the harbor, and showed us the condition of the landing places of vessels that communicated directly with Mississippi ports I remember there was a vessel being loaded with lumber just below the military hospital, when Dr. Burgess said the place had not been without yellow fever, to his certain knowledge for 30 years, day in and day out. The vessel was bound for Pascagoula, Mississippi. The next day we visited several of the hospitals and saw many cases of yellow fever. The doctors were courteous, and obliging to us, and afforded every facility for investigation. He also visited one of the El-Concentrados, an immense building in which were confined hundreds of the insurgents, by order of the Spanish Government, thinking to check the insurrection by bringing in people from various parts of the island, and allowing them to starve. This spectacle of those starving people, many of them lying on the bare floor was the worst condition I ever looked upon. Starving infants tugging away at the breasts of starving mothers. After investigating Havana, we proposed to go to Mantanzas, but thought best to consult General Lee, and he told us that just the day before, the railroad to that place had been torn up by the insurrectionists, and said we could go if we chose to do so, but he would not guarantee our safety. So we decided to return to Mississippi. But before leaving we were invited by Dr. Wasdin to have dinner with him, and his friends of the Marine Hospital Service, who were at that time also looking into the question of yellow fever infection. At that dinner the question of safety of Americans in Havana was freely discussed and Wasdin stated that he thought that a vessel should be sent to Havana for the protection of the citizens of the United States. After considerable discussion it was suggested that as I was the oldest person in the group, I should call on General Lee, and state the opinion of the men present. I declined to do so at first, giving as a reason that I was not personally acquainted with General Lee, and that I felt some hesitancy in approaching him on the subject. But finally I consented if a convenient moment should occur, to see him. He was staying at the Hotel Ingleterra, the dining room of which was on level with the street pavement, with low open windows, and I noticed that General Lee, always in taking his meals, sat in a corner of the room with his back to the wall. The following day our party had just finished dinner, when he came in, and I was told "Now is your opportunity to speak to him." So I went over to his table, where he was seated alone, and had a conversation with him. He talked freely. I told him of the sentiment of our group of doctors and that they felt that they should have some protection. He said, "Oh! I told Wasdin, Mrs. Wasdin is chairman of the sensation committee, I do not know what Spain would think if we were to make a demand on our Government to send a vessel here. The Spanish might resent it." I said, "Well, General, of course you know the situation and we do not, we wish only to tell you how we feel about it." And with that I bowed myself away. On our way back home, we passed the battleship Maine at Key West, and I remember what a beautiful sight she was,—with all the marines on the decks, and the bands playing our national airs. That was in January, and in a few weeks, the Maine was at the bottom of Havana Harbor, and the war with Spain was on. I have often wondered if our committee had any part in causing the Spanish American War, by influencing General Lee to ask for a war vessel there.

Acceptances of Program Guests For Mid South Meeting

Dr. F. A. Willius (Medicine) Rochester, Minn.

Dr. Mont R. Reid (Surgery) Cincinnati, Ohio.

Dr. Harry C. Solomon (Neuro-Surgery) Boston, Mass.

Dr. Ramon Castroviejo (Eye) New York, N. Y.

Dr. Thos. G. Orr (Surgery) Kansas City, Mo.

Dr. Harvey B. Stone (Surgery) Baltimore, Md.

Dr. Floyd E. Keene (Gynecology) Philadelphia, Pa.

Dr. E. R. Long (Tuberculosis) Philadelphia, Pa.

Dr. Russell L. Haden (Medicine) Cleveland, Ohio.

Dr. Hugh Cabot (Urology) Rochester, Minn.

Dr. A. Graeme Mitchell (Pediatrics) Cincinnati, Ohio.

Dr. A. F. Hartmann (Pediatrics) St. Louis, Mo.

Dr. Cyrus C. Sturgis (Medicine) Ann Arbor, Mich.

Dr. Gabriel Tucker (E. N. & T.) Philadelphia, Pa.

Dr. E. L. King (Obstetrics) New Orleans, La.

Elected to Board

Dr. Edward C. Ellett, of Memphis, has been elected to the board of directors of the National Society for Prevention of Blindness. He succeeds Dr. William H. Wilmer, of Baltimore, who died recently. Dr. Ellett is a graduate of the University of Pennsylvania and has been a member of the American Opthalmological Society since 1912.

William Fellowes Morgan has been re-elected president of the society. Other officers are Dr. Park Lewis, of Buffalo, first vice president; Russell Tyson, of Chicago, second vice president, and Preston S. Millar, of New York City, third vice president.

Three strangers were in the Pullman smoker, when one of them turned to another and asked: "How f-f-far is it t-t-to P-Pittsburg?" The man addressed made no reply, but got up and left the car. The stutterer then turned to another man, who gave the information. A few minutes later, the man who had answered the inquirer met the one who had left the car and said, "See here; why did you go out without answering when the man asked you a civil question?" "D-D-Do you think I w-w-wanted to g-g-g-get m-my head knocked off?" was the answer.

THE MISSISSIPPI DOCTOR

The Journal with a vision, the delivery of modern medicine to the masses at less cost to the individual and more profit to the practitioner. The champion the small hospital, the hub around which this service must be built.

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Official Organ of
Mississippi State Medical Association
Mid-South Postgraduate Medical Assembly
Owned by
Northeast Mississippi 13 County Medical Society

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In this issue of the journal we are giving special attention to infantile paralysis, poliomyelitis. Dr. W. A. Evans, the nestor of all on the subject, has an article. Dr. Gilbert Levy, of Memphis, and Dr. T. H. Blake, of Jackson, were kind enough to write articles on the subject. Dr. George W. Mast working under Doctors Underwood and Ricks, of the state board of heath, has furnished us a number of pictures taken from the field and The Mississippi Doctor at quite a bit of expense for cuts is giving you the latest from Northeast Mississippi. We are very grateful to these doctors for their cooperation in giving our readers this timely information on this subject.

We thank Dr. Robert A. Strong for furnishing us this timely article on diarrheas. He speaks with authority. The subject should be of great interest to every practitioner.

Bits of medical history now and then should be relished by all forward-looking medical men.

The per capita distribution of funds for the indigent sick provided by the state legislature at its last session was a great step forward. It took hard pounding for a number of years to accomplish this piece of justice and progress. The hospitals and the medical profession should not leave one thing undone to make this plan a success. If it is properly administered, the funds used for the actual emergency cases for the ones in dire need, it will prove a great success. The funds will be increased at the next regular session of the legislature. If we abuse the plan, we may lose what we have. The greatest responsibility rests on the family physician. He must be fair. He must not deny in a deserving case, but he may have to say no many times. Just because a man does not have ready cash in his pocket does not mean that he is an object of charity. Let us be careful, but let us be courageous in the administration of this plan. The plan is not really complete. We need an up-to-date central hospital as a clearing house and in connection with it a two year internship that would render a fine service and aid medical efficiency in this state.

Mississippi's tubercular hospital is a great credit to our state. It is a monument to the brain that conceived it. It is known around the world. We should feel very proud of it. It has done a great work. It has much more to do. The time is now at hand to carry this service out to the small town and rural communities, out to the counties. Our present hospital should remain the center, the clearing house, the teaching center. We should have beds in every county or every two or three counties in the state to take care of T. B. cases, to do preventive work and to protect the public against the hopeless cases. This is very important. It strikes us that the most economic thing to do would be for our small hospitals each to have a wing or a few rooms on the same ground to care for these patients, either this or a small hospital for every two to five counties to care for tubercular patients alone. The combined system is preferable in our opinion. But it is a very important question to study out, to determine what is best. Let us hear from Dr. Henry Boswell on this important subject.

In our last issue we are under obligations to the C. V. Mosby Company, of St. Louis, for the cuts used in Dr. Abraham Levinson's paper. It was nice of this splendid company to extend us this courtesy. Dr. Levinson, of Chicago, is an authority on the cerebrospinal fluid.

There is no one thing common or of small importance in the practice of medicine.

There is a responsibility on a medical journal. Its function is not confined to the dotting of an i, the crossing of a t, and the collection of bits of local social items. Securing papers on timely scientific subjects when the profession want and need them is of great importance. A medical journal should be a great help in solving our medical problems which are always many and varied. The development of men in the profession is something that a medical journal can do sometimes by inviting one to write an article although the first one may not be worth so much to others. The recording of medical history and giving due credit to the makers of this history is a noble work for a journal to perform. Pointing out the superior things being done today by the average everyday doctor in his everyday practice is productive of efficiency and better service to the people. Encouraging team work in thinking for the birth of a new thought in medical science is a noble effort. Individual observation and individual discovery should be encouraged also. These are just a few ideas that an editor needs to keep in mind.

Dr. G. S. Bryan is giving us some editorials dealing with history and with personalities of the state medical association that are instructive and inspiring. If you are to dip far into the medical future you must first climb the hill of its history. If we expect future sons to go to the battle front for their country we must give due credit to past deeds of valor. Sons in the medical profession who do not look back to their ancestors will not look forward to the work of their offspring. Thank you, Dr. Bryan, for this splendid work done for the love of service.

Mental sickness seems to be on the increase everywhere. It is time to begin a campaign of prevention in this field, one more definite, one more persistent than we have ever had before. We are paging Dr. W. A. Dearman to write the first article. He is assistant superintendent of our state hospital at Jackson. He is the Osler of Mississippi in medicine. He will have the hospital to help him and the knowledge and the wisdom of Dr. C. D. Mitchell to aid him. You are called for, Dr. Dearman. Let us get a definite start on this very important problem.

We are carrying over some fine papers this month in order to give our readers some information on the infantile paralysis problem. Papers of Drs. Straatsma, Beck and Warr will be coming along, none better than these.

Dr. J. Rice Williams, of Houston, spent a few days in Booneville recently. He is Grand Lecturer of the Gand Lodge. For many years he has had a high standing in the Masonic Lodge. Dr. Williams is one of Mississippi's really great men. In his field of radiology he stands right at the top for his state, and in addition he is a real citizen in the true and noble sense. Where citizenship calls he is always found there.

You will note the advanced program of the Mid-South in this issue of the journal. As usual it is fine. This program covers, in a fine way, the field of medicine and surgery by the outstanding authorities of the United States and Canada. We have had too many men who have not availed themselves of the great opportunity that it offers. Make your arrangements now to attend the meeting in February.

The meeting at Amory of September 15th of the Northeast Mississippi Thirteen Counties Society is going to be a hummer like the last one at Columbus. Dr. Stacy is giving us some fine programs. It will be good to be at Amory. This is the home of the "Sage of Monticello" in Mississippi Medicine, Dr. G. S. Bryan.

The Northeast Mississippi 13 Counties will hold its next meeting in Amory. It will be good to be there. It is a fine town. It has the Bryan spirit. This is saying enough.

You will note in this issue the list of essayists who have already accepted for the Mid-South. Make your arrangements to be there. You can ill afford to miss it.

If your patient hails from a "sandy community" don't forget to examine for hook worms. They are still right plentiful.

The annual session of The Mississippi State Medical Association for the year 1909 was held in Jackson April 13-15. It was a splendid meeting. The late Dr. J. W. Gray presided at this meeting. His address was very short and seemed to have but one purpose; namely, to arouse and increase the interest of the association in the passage of state laws touching public health and medical practice. The point was well taken and in my opinion was helpful along these lines. Another noticeable feature of this meeting was the large number of papers contributed by members of the association. Less than half dozen were by out of state men. These, however, were splendid papers and were highly appreciated by the membership. One of these was contributed and read by Dr. Frederic J. Mayer, of Louisiana, who was then employed by the Mississippi State Board of Health to travel and lecture throughout the state on hygiene and sanitation. In my thinking this series of lectures to the lay-public did more to further interest in public health than any one other thing that has ever been done in the state. Dr. Mayer was and is a very scholarly man and had the capacity to put the subject over in such way as to impress the lay mind. He was successful in his efforts to enlist the doctors in this great work also. Dr. Mayer has grown old since then and has been living in retirement on his Louisiana farm. He was never married and when I last saw him—at the meeting of the Southern Medical Association in New Orleans a few years ago, he told me that he was happy in the care of his mother who had then reached the age of about one hundred years. At the time of that meeting with him he referred to the work he had done in Mississippi and said the only public mention of it that he had seen was in the presidential address of this writer a few years previously. There was a tinge of disappointment in his voice as he mentioned this, but he seemed very appreciative of the kind things that I had said of him and his work for us. I wonder if we are as prompt as we should be to express appreciation and give credit to those who deserve it? In the loneliness of old age and declining years the memory of these little things bring much comfort I am sure.

A splendid paper on "Prophylaxis of Insanity" was read by Dr. J. M. Buchanan. Had this paper been properly appreciated and the suggestions offered been carried out, it is more than probable that much human suffering might have been prevented and much expense been saved the taxpayers of the state. A short but splendid paper was presented by Dr. W. W. Reynolds of Meridian, a man of whom we have heard but little since then. His subject was "The Uses and Abuses of Medicine." I wish that all our members would trouble to look that paper up and read it carefully—especially our younger members. In this paper he stated that only two or three drugs were specific cures of disease. I did not agree with him then, but I have gone beyond him now. I do not acknowledge a single drug, now, as a specific cure. However, I do regard a few drugs as being of great aid in nature's efforts at cure. Even the great Osler was unjustly classed as a therapeutic nihilist, but his teachnig as to the futility of much drug administration, is now accepted as true. Clendening, in his late book on treatment of disease, has this to say, **"With rest** you can treat heart disease without drugs, tuberculosis without climate and appendicitis without surgery—without it (rest) you can do **nothing."** There were many noteworthy papers presented at this meeting, but of course I can not speak of them all. Still I feel that they have contributed something to the advancement of medicine in our state. I trust that I may be pardoned for referring to a paper that this writer read at this meeting. While it seems to me as a feeble voice from out the distant past, I am not wholly ashamed of it even now. If any one should care to read it, it may be found on page 175 of the 1909 transactions. Truly, time is fleeting and nothing is eternal but truth. When discovered let us "grapple truth with hooks of steel."

I can not close without reference to the recent death of my friend and colleague, Dr. Richard M. Boyd, of Aberdeen. He was buried yesterday at sunset—August 26th. He was, indeed, a rare soul. He was kind, gentle, studious and intelligent. He gave his life to and for his friends.

G. S. B.

Dr. Wm. Needham Blount

Dr. William Needham Blount, age 64, who died August 27, in a New Orleans hospital, had been a prominent citizen of Laurel and a leader in South Mississippi medical circles for many years. He was chief surgeon for the Gulf, Mobile & Northern Railroad Company for 17 years and at one time owned and operated the Laurel General Hospital.

Dr. Blount was born in 1872 at Old Williamsburg, Covington County. He was graduated in 1894 from the Louisville Medical School, now part of the University of Kentucky. His father, T. C. Blount, is recalled as one of the pioneers of South Mississippi, founding the old town of Blountville, now known as Prentiss.

Dr. Blount practiced medicine at his home town, Williamsburg, later locating in Collins. It was there he volunteered for service with the Medical Corps of the United States army when the United States entered the World War.

After the Armistice was signed and Dr. Blount received his honorable discharge, he moved to Laurel in 1919. He acquired the hospital there and was appointed chief surgeon for the G., M. & N., which position he filled until his recent illness. He was a membre of the board of stewards of the First Methodist church in Laurel.

He leaves his widow, Mrs. Olive Calhoun Blount; two daughters, Mrs. Holt Montgomery, Laurel, and Mrs. D. A. Brown, New Orleans; a son, Paul Blount, employe of a Laurel bank; a sister, Mrs. John L. Berry, Prentiss, and four brothers, Capt. J. A. Blount, Charleston, Miss., attorney, Dr. Estes Blount, Bassfield, and Buford and Lawrence Blount, both of Collins.

ALONG THE MEDICAL HIGHWAY

NOTES ON ACUTE ANTERIOR POLIOMYELITIS

GEORGE W. MAST, M.D.
Jackson, Miss.

We have heard so much about Acute Anterior Poliomyelitis the past few months that it is getting to be a bad dream to most of us. We see it, but can't believe it is true. And, speaking from personal experience, the writer develops fresh symptoms of poliomyelitis regularly once a week. We suspect that this may also explain in part why some of these patients are visited rather infrequently by their physician and health officer after the diagnosis is made but of course we may be wrong, but that has been the impression we have gathered.

As you all know, the public fear of contracting the disease is great, with a new wave of panic every time another case is reported in that locality. But between waves, most of them let their children go out, and stop using the nasal spray that we have such great hopes for. Then when a new wave of fear strikes them they pounce on the doctors to do something, and generally criticise him because he doesn't know anything else to do.

Most of the diseases we know are more serious and cause more loss of life and limb than poliomyelitis, but the mystery surrounding the disease and the economic loss to those and their families affected make it more spectacular in its appeal.

For all these reasons, it is vitally necessary that we, as physicians, must learn all that we can about the disease and, wherever possible, add to the little store of knowledge that is being gradually built up about it. Only in this way can we retain the confidence of our patients and eventually conquer the disease. You know, it is rather embarrassing to make a diagnosis of malaria and have the child show up with a paralysis later. Yet that is just what has happened here many times this year already, and unless we keep on the lookout will happen again. We must also learn something of the after care of these patients and give the parents something to do and some hope for a better end result because already certain unscrupulous groups are soliciting their business with all kinds of promises and propaganda.

And the disease is spreading over our state further every day in spite of all we can do to prevent it. It comes in waves apparently, and will subside for a week or ten days then start up anew. It will, no doubt, continue to spread for several weeks yet, but usually subsides with the advent of colder weather. However, there have been several outbreaks that occurred in the winter months since the disease escaped from its endemic home in Norway and Sweden about seventy years ago and became an epidemic disease. The mortality and morbidity is higher in the winter outbreaks. The virus undergoes rather marked changes in virulence, apparently of a spontaneous nature, and the mortality rate varies greatly with different epidemics and in different localities. In New York City during the epidemic of 1916 the mortality rate was 26.9 per cent and in 1935 in the same area only 4.2 per cent.

The "normal" expectance of poliomyelitis is about 1.3 cases per 100,000 population in the South but during epidemic periods may go as high as three cases per 1000 population and in one of our towns has reached one case per 1000 already.

Blondes are more susceptible than brunettes apparently. And practically all of our cases have been in blondes, red heads or very light brunettes.

Negroes seem to be less susceptible than whites. We have only had four cases among negroes reported out of a total of fifty-four cases for the state. Of course, the negro population of the affected areas is much smaller than the rest of the state but we do not believe this accounts for all of the discrepancy.

All of our cases, except four, have occurred in children under the age of fifteen, and most of them under five years of age. The oldest case is forty-one and the youngest four months. Cases have occurred elsewhere however, as young as two months. The mortality rate is greater in the very young and in the older age groups.

Symptomatology: Most of our cases have started off with malaise, fever of a moderate degree and frontal headache as a rule, but may be occipital or generalized. Then they develop some nausea and vomiting and stiffness of the neck and back. This may occur the first day or several days later. The fever lasts a few days—usually three to four days, and may disappear for an hour or a day then rise again. We have been unable to see this double rise in the majority of our patients, however. The paralysis usually comes on a day or two after the fever subsides, but may occur while there is still fever. This paralysis usually gets worse with an extension of the involvement for the first week of illness then gradually subsides and improvement is noted for several months, and, with proper treatment for several years.

Some of these cases complain of their eyes aching and there may be some photophobia. Others have urinary retention for about a day or so, then pass a large quantity of clear colored urine. Several have had a sensation of the nose "stopping up" or of a watery nasal discharge which did not become purulent later.

There have been chills and fever in some cases with negative malaria smears. Usually this is confined to chilly sensations and extra cover or heat to the extremities was sufficient, but one man had a very hard rigor, and an occasional case will have a convulsion. These chilly sensations are commonly followed by profuse sweating and a lot of them have the sweats without the chills.

The severe cases with chills, convulsions, high fever and rapidly progressing paralysis are usually of the bulbar type, and death may occur in six hours from the onset without any paralysis of the extremities having occurred. In these cases, which are fortunately rarer than the others, there is usually a cranial nerve involvement with paralysis of the facial muscles and of the pharynx and larynx (usually difficulty swallowing, fluids regurgitate through the nose, and a "nasal twang' to the voice.) These cases commonly die of cardiac or respiratory involvement, which may be sudden. They usually have a lot of thick mucous in the larynx they have difficulty coughing up. Their temperature averages about 104°F. but may go higher. In general, the higher the temperature in a case the worse the prognosis.

In the usual type of case paralysis occurs in the legs first and is noticed by the legs folding under the child and it falling when it tries to stand up. Paralysis may be in one or both legs and extend into the arms.

The muscles are sore and painful when pressed. The muscles usually involved are the adductors of the thigh, the internal rotators of the thighs, the extensors of the legs, the dorsi flexors of the foot, the deltoids, and muscles of fixation of the scapula and external rotators of the arm. The sore spots particularily to notice are on the inside of the upper third of the thigh, the lateral side of the upper third of the leg and over the deltoids and scapula muscles.

The affected leg lies in external rotation, some flexion at the knee, and with the foot planar flexed due to the pull of the more powerful groups not involved as much.

The arm commonly can not be raised above the level of the shoulder in involvement of the upper extremity.

There is one point that may be of interest: that when there is involvement of the deltoids there is practically always some involvement of the muscles of respiration, both the intercostals and abdominals.

All the cases we have seen had a generalized lymph adenopathy. Particularly was this true of the posterior cervicals and inguinal lymph nodes and seemed more pronounced on the side of the body most involved. Of the posterior cervical nodes involved, the inferior deep cervical group at the lower posterior border of the sternomastoid were more noticeable. These nodes drain the pharynx and nasal cavity through the superior deep cervical group along the carotid sheath.

There is a lot of discussion as to why the lymphatic structures are involved in poliomyelitis, but we would like for you to note this posterior deep cervical involvement, especially noticeable on the side of the arm involved, and the inguinals on the side of the leg most involved. It has been true here so far, but in some of the New York epidemics lymph node involvement has not been a constant occurrence.

All of our cases, but one, have had a positive Brudzinski and the chin could not be placed on the chest of the patient. The back likewise is stiff and bends little. There may be opisthotonos, but it is not the rule.

One of our cases passed tarry stools for several days. This was an unusual occurrence but may be explained we believe, by the fact that about 75 per cent of the cases coming to autopsy show submucous hemorrhages in the stomach and some have a definite ulceration of Peyer's Patches in the small intestine.

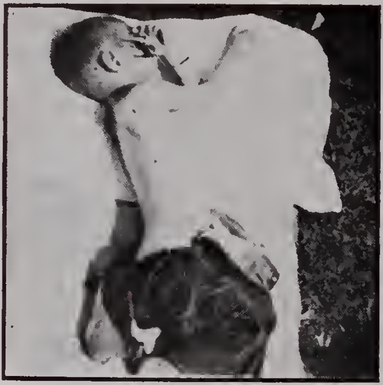
We believe that the disease is spread mainly by personal contact through the secretions of the nose and throat of carriers and patients. However, the contact that it takes to acquire the infection must be slight indeed, and there must be a large percentage of the population that becomes carriers of the disease during epidemic years or else you would be entirely unable to explain some of our cases. In one family whose child had the disease there had been no visitors nor any contact with the outside world for three months except that the father of the child had been to town on Saturday afternoon just one week prior to the onset of the disease in his child.

Another striking thing is the progress of the disease from a central focus along the highways leading out from that area. It almost appears as if the virus was marching out along the highways from that central point of origin. True, it sometimes skips and pops up in a distant area, but generally it does not.

We have a few case histories and pictures that might be of interest. We hope that we will have gathered some information that may be of value by the time this epidemic is over. If so, it will be presented later.

CASE No. 2. Colored, male, age four years. Onset 7-1-36. Picture taken on 29th day. Onset with fever, and pains in abdomen. Third day noted weakness in left leg and could not walk for several days. Was vigorously massaged from the beginning in spite of the soreness of his muscles, and walking was permitted as soon as patient could stand or hop on his leg. Now has left foot drop and contracture of Tendo Achilles, some atrophy of muscles of leg and partial contracture of flexors of leg, genu valgus and external rotation of thigh. There were fourteen other people living in this five room house with four other children under seven years of age all playing together during the illness of this patient who was the only one developing the disease.

CASE No. 3. White, male, age nine years. Onset 7-6-36. Picture made one month and ten days later. Slight sore throat 2 to 3 days before onset, then patient fell and fractured right humerus and had some fever that night. Five days later he could not swallow and fluids were regurgitated through the nose. Speech of "nasal" quality. Temperature up to 101° on sixth and seventh days. Nasal feedings given from fifth to twentieth days. On tenth day developed weakness of both arms and some difficulty breathing during this week. Now has almost complete paralysis of left arm and of right deltoid and shoulder girdle but is rapidly regaining the power in his right shoulder and some contractions of left arm muscles can be felt. Had a partial paralysis of right flexors of the hip joint and of the abdominal muscles but has regained their use. Can swallow very well and speech is somewhat improved. This child had a birthday and swimming party the day he became ill and exposed nearly every child in the neighborhood without any of them apparently contracting the disease to date.

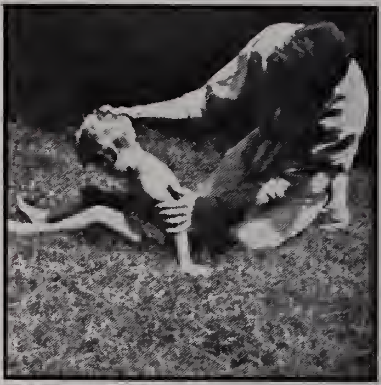


CASE No. 11. White, male, age four years. Onset 8-1-36. Picture taken the seventh day of illness. Onset with fever, frontal headache, and vomiting which lasted two days. Constipation first three to four days. Developed stiffness of the back and neck with some opisthotonos and soreness with aching pains of the body and legs on the 2nd day. Later this day developed a paralysis of left leg. On 6th day had a paralysis of left arm and shoulder. When seen on the 7th day he lay very quietly on his left side and cried when moved. Some opisthotonos and neck and back rigid with positive Brudzinski. Pharynx was red and moderately inflamed, has a complete flaccid paralysis of left leg and a partial paralysis of right leg: both deltoids are paralyzed, abdomen slightly ovoid and painful when touched—especially over rectus and both upper quadrants. Abdominal reflex slight on both sides.

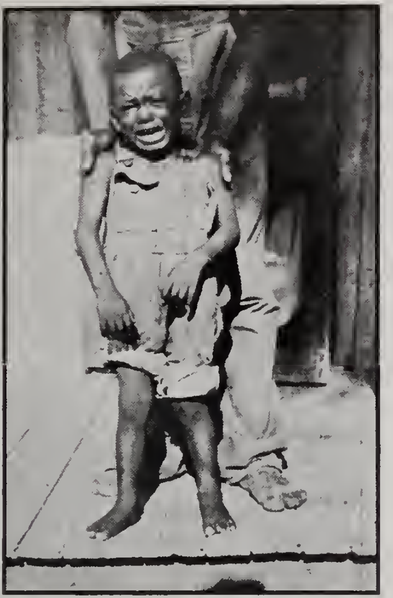
There were four other children in this house under eleven years of age, one of them had constipation, frontal headache and sore throat seven days after the patient became ill, but was well in two days.

CASE No. 6. White, female, age 4 months. Onset 7-8-36. Picture one month after onset. Began by crying and apparently feeling very bad. Next day, had fever lasting 3-4 days. Vomited 2nd day, head was drawn back, back was stiff, and the child seemed lifeless, and would not move. Constipation 2 to 3 days. On 2nd or 3rd day began to strangle and choke when given fluids. This lasted three to four days. One week after the onset and about three days after the fever subsided its leg folded under and when the mother tried to stand it up. Patient improved slowly and when seen one month later had only a remaining right foot drop with contracture of the toes of this foot so that it stood on them when in the upright position

There were four other children in this house under seven years of age, eight people living in there altogether. Strange to say, all eight of them had some symptoms of polio varying from a watery nasal discharge to nausea, vomiting, constipation and a frontal headache in the one most affected. None of them developed paralysis except the patient and all were apparently well within a week.



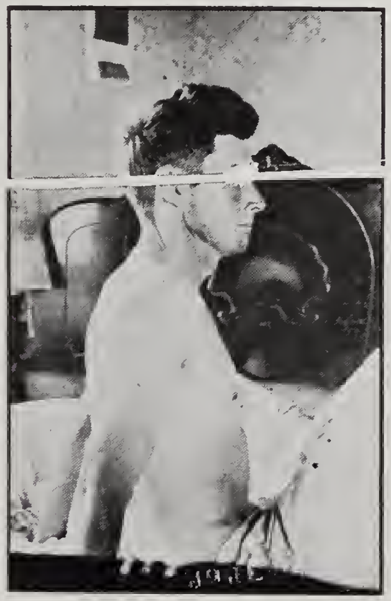
CASE No. 18. White, female, age 3 years. Onset 8-8-36. Pictures taken on 3rd day. Began by being very cross and irritable the first day, was apparently all right the next day and played all day, but on the 3rd day complained of a frontal headache and cried with the pain in her head especially when in an upright position. Constipation since the first day. Stiffness of the back and neck and couldn't get up well from a prone position. Some strangling on swallowing liquids also. Her pharynx was moderately hyperemic as was the soft palate and nasal mucous membrane. The right pupil showed an irregularity on reaction to light. The posterior cervical and auricular lymph nodes were enlarged as were the inguinal nodes on both sides. Brudzinski's sign was positive and patient cried when her neck was bent forward. This patient did not develop any paralysis and is apparently completely recovered. Her father, however, developed the disease four days after the child did (the next day after this picture was taken) and now has a partial paralysis of left leg and left arm and such an extreme hyperesthesia of his legs that he can not even bear to have the sheet touch them.



CASE No. 15. Colored, male, age 2½ years. Onset 7-26-36. Picture taken on 20th day. Began with fever, lassitude and irritableness. Had had a watery nasal discharge for one week before this, however. On 2nd day developed muscle twitchings and could not hold anything in his hands. Third day dragged his left leg and couldn't raise left arm above the shoulder. His arms and legs were extremely sore and he cried when moved or handled. Now has partial paralysis of left leg, slight foot drop with some genu valgus and hyperextension at the knee. Inguinal nodes are enlarged and palpable as are the posterior cervicals, post auricular, and occipital nodes—this is especially marked on the left side of his body.

CASE No. 20. White male, age 5½ years. Onset 8-9-36. Picture taken on 6th day. Began with frontal headache, fever, malaise, vomiting, and sore throat. Next day stiffness of the back and neck. Fever lasted four days. He then felt better and played with a neighboring child the 5th day. On 6th day when he got out of bed he fell and couldn't stand up. His left leg was paralyzed and the right, weak. He was examined on this day and found to have redness of pharynx and cervical lymph nodes enlarged and palpable—expecially on the left, as were also the inguinal nodes. Neck stiff. Brudinski positive. Left flaccid paralysis, and absent reflexes on left, hyperactive on right.

Notice the home made sand bags around his feet and legs. This patient cries when the sandbags maintaining a neutral position of the foot are removed and his foot drops down.



CASE No. 23. White, male, age 27. Onset 8-5-36. Pictures the 11th day. Began with general malaise, and nose seemed "stopped up" for a day or two, then headache followed by a chill and fever and was in bed three days. Felt better on 5th day and went to a ball game. That night he had another chill and rise of fever to 104° with some soreness of his throat. On the 6th and 7th days his feet and legs were cold and had to put a hot iron to them. He then began to have some aching behind his eyes and his eyes seemed to "draw' and felt as if he were having trouble closing them. His neck also began to get stiff at this time. Some twitching of his arms and legs at times on the 9th and 10th days and noticed a soreness of both sides of his face on the 10th. He was extremely irritable and slight noises disturbed him a great deal. There was some difficulty swallowing and somewhat of a nasal "twang" to his voice with abdominal cramps, occipital headache, sweats and weakness of his left arm and leg on the 10th and 11th days. He seemed to be rapidly getting worse at this time. He had passed "tarry" stools for several days.

Was examined on the 11th day and appeared anxious and very irritable; pupils reacted equally, but poorly, to light. Pharynx reddened and cervical and inguinal lymph nodes enlarged, especially on left. Neck was stiff and Brudzinski positive. Abdomen somewhat tense and painful, particularly in the upper abdomen. His left arm and leg were weak and showed some involvement. All of his muscles were extremely sore and painful when touched. Especially was this true of the adductors of the thigh, the extensors of the leg and the dorsi flexors of the foot. Notice the rigidity of the back and neck, the position and the spasm of the neck muscles, also the expression of anxiety on the face. Most text books say this is a typical picture but our experience seems to show that most of the patients will prop themselves up on one arm or elbow instead of using both as he has done. Most of these patients have such a "poker-like" stiffness of their neck and back that you can lift them upright in bed by placing your hand behind their head and lifting. Their backs bend very little.

Dr. Robert A. Strong gave a course of postgraduate lectures in pediatrics at the Northeast Mississippi Hospital in Booneville beginning August 17. He is a very popular lecturer and he is well versed on the subject. Dr. Lapham has given us a fine course in obstetrics. The negro doctors of the state are to have postgraduate courses now brought to them. This work is a great step forward. The busy practitioner can hardly find the time to leave his practice and take a course in the medical centers. Out in the rural community and small town in many instances there is no one to take his place. His income is so small that he can ill afford to bear the expense. Carrying medical education to the busy doctor is the fair and sensible thing to do It aids the doctor and in turn serves the people. In addition to this direct and practical benefit to the doctor and his clientele there are other considerations. Medical science needs the clinical observation of the practitioner. Herein lies one of our greatest possibilities for medical progress in discovery of the cause and cure of disease. And another great benefit that will result is the final influence on the medical schools. The average medical school needs a good overhauling. They teach in terms of expensive operating rooms, internes and nurses. The graduate comes out unfitted for work in the small town and rural community. The keen observer giving these courses will soon make his department more practical and great good will be done.

Dr. Richard M. Boyd

Dr. Richard M. Boyd, 60, prominent North Mississippi physician and noted diagnostician, died suddenly Saturday night, Aug. 22, at the George Washington Hospital in Washington, following a paralytic stroke at a Washington hotel yesterday afternoon.

Dr. Boyd was returning from the Johns Hopkins Hospital in Baltimore where he had gone for a throat examination and stopped in Washington to visit a friend. He served throughout the World War with distinction, was gassed, cited for extraordinary bravery and was made a captain. After the Armistice was signed, he entered the University of Nancy, France and studied several months before returning to the United States.

He was born at Nettleton, was graduated from the Mississippi high schools and colleges and was graduated from the University of Tennessee in 1901. He married Miss Erline Collins of Houston. He was a prominent Mason and Shriner, member of the Daniel W. Bird post of the American Legion and an official in the Presbyterian Church.

He leaves his widow and three sisters, Mrs. W. H. Kolb, Mrs. Silas Noah of Aberdeen and Mrs. H. C. Brevard of Amory.

Negro Physicians Aided

Dr. Felix J. Underwood, state health officer, recently announced the launching of Mississippi's first medical education program for negro physicians.

Dr. Walter H. Maddux, lecturer and clinical demonstrator for the program, began a series of lectures at West Point Monday, Aug. 31. Others have been scheduled for Meridian, Jackson. Greenwood, Greenville, Natchez, Hattiesburg and Gulfport.

Dr. Underwood said the immediate objective of the course is a lowering of the maternal and child sickness and death rate for negroes in Mississippi. It is being sponsored by the state health department, the Mississippi Surgical and Medical Association and the Federal Children's Bureau at Washington.

Following a postgraduate course with the 57 negro physicians who are members of the state surgical and medical association, Dr. Maddux will engage in special health education work among the negro teachers, ministers and the race generally.

Sudden Death*

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Upon invitation to prepare a paper for presentation to a group of distinguished physicians from the many medical societies of this section of the state, one's natural inclination would be to endeavor to select a subject of interest to all who are in attendance or else give expression to his own particular thoughts or theories or ideas along lines of research, experience or observation gathered in years of practice.

In choosing "Sudden Death" as a title to this offering, I feel it will be of concern to all present, for no doubt each of us has many times pondered over the problem, either when attending such a case, or arriving shortly after an occurence of this nature, and usually if not always, upon the simultaneous call of the mortician and appearance of a death certificate for our signature.

Before the certification of death and its causes by the attending physician or others, as required by statue, there were no appropriate methods for obtaining statistics concerning one's demise and even now though the number may be fairly accurate in various registration areas yet the causes as specified are no doubt far from being correct, in fact, without necropsy reports those assigned are often quite unreliable except in a general way.

And even when this report is made frequently no information of definite character is obtained, because at times the pathologist is unable to determine the exact cause of a sudden death. True he may be satisfied, for instance, that it is cardiac, but why this particular organ suddenly and without exception stops beating is a mystery to him as well as to others, for in a large percentage of such cases, concrete evidence of pathological damage is in no way discernible.

Yet this condition should not in any manner discourage the advisability of necropsies on all sudden deaths, to be sure some have suggested that such procedure should be required by the state, county or municipality in which we live.

Many sudden deaths occur under suspicious circumstances and one appearing as due to disease may really be found at autopsy to be due to a poison, perhaps criminally administered, and again those thought to be due to suspected crime may in a reverse order present evidence of disease as a primary factor, thus this phase of the subject assumes a non-negligible degree of importance from a sociological as well as medico-legal viewpoint.

A routine examination of such cases would in many instances be welcome by some unfortunate physician who has been unjustly and bitterly assailed, and condemned for some death occuring suddenly after the administration of some hypodermic medication, clearly indicated and harmless, yet by coincidence, a living patient dies at the psychological time for false accusations by those unfriendly either within or without the professional realm.

The necroscopist report on such a case would clarify the situation and save some good doctor a lifetime of regret and much unhappiness, also reinstate the former friendship existing between him and the deceased family and eliminate criticism so often leveled at those striving to serve humanity in a laudable calling.

Sudden death may be defined as the ending or termination of the heart's activity quickly or within a very short period. It is usually unexpected as to exact time.

True warnings and suggestions may have been given that such a death might be expected, circumstances and environments described and often after the signals of an impending and approaching dissolution are apparent, the patient may yet live a few brief hours before entering into the long sleep which knows no awakening.

There is nothing quite so astounding and dramatic as a sudden death. Grief, horror, fear, despair, all play prominent parts and the role assumed by family or friends may vary, yet in the final analysis as far as the victim personally is involved, he or she has saved and avoided much suffering, trouble, worry anxiety, apprehension and outlay of funds, both for himself or herself and the immediate family.

Perhaps this is an ideal way in which to meet the summons, yet for centuries past mankind has prayed to be spared this manner of exit, however it becomes more and more prevalent and less uncommon from day to day. In fact, its frequency is somewhat startling, its luxury and swiftness appreciated as never before, and after such a fatality, always one hears expressions from those present, desiring their final call to be issued in like manner.

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*Read before the joint county meeting at Shiloh, June 30, 1936.

In offering this paper we are excluding sudden deaths due to violence, disasters, those self inflicted and accidental such as the thirty-five thousand per year in this country that are classed under automobile casualties. We shall discuss those due to natural causes, which are either expected or unexpected by the physicians consulted or family or individual affected.

Many of these occur while asleep in the privacy of one's home, others on hospital beds attended by trained nurses, some under the care of physicians, others never examined by a doctor, some while eating a meal, commonly in one's bath room, some actively engaged in usual duties, others while pleasantly enjoying the visit of friends, some in a fierce rage of temper. The time may be early in the morning or after the hours of toil.

An additional feature is mentioned and another hazard to be considered when such a death occurs to one while driving an automobile, thus endangering the lives of others, causing wrecks and possibly deaths to many.

Years ago we were taught that sudden deaths could be classified under the following causes, first, coronary thrombosis, second, pulmonary embolus, third, internal hemorrhage and fourth, status lymphaticus. This arrangement appeared to answer for all practical purposes for a long time, now it seems advisable to modify or change the above classification for in spite of much evidence offered for the retention of the term status lymphaticus, it has fallen into disuse and condemnation as will hereafter be mentioned and quoted.

We have all either seen or heard of some child dying suddenly on an operating table, usually at the beginning of the anesthesia and quite frequently before a tonsillectomy has begun. This is in most cases of unexpected and sudden deaths in children who are apparently in good health is commonly attributed to status lymphaticus.

From a study made of necropsy reports in Bellevue Hospital of New York City, Symmens states that in 5652 records studied status lymphaticus was found in 457.

It is thought that pressure on the heart by an enlarged thymus gland or on the trachea might bring about a paralysis of the heart muscle, and it is doubtful that the secretion of the gland assumes any responsibility whatever in such cases.

At the present time however, status lymphaticus does not answer the question as to cause of death, it does not suffice, has fallen into disfavor and meets with disapproval from reliable authorities.

The committee appointed by the Medical Research Council and Pathological Society of Great Britain and Ireland, after a long study came to the conclusion that there is no evidence of the existence of so called status lymphaticus. The discussion still goes merrily on nevertheless, as it is a highly controversial point, and the problem remains to a great extent unsolved.

Seemingly a better classification of the causes of sudden death would be as follows, circulatory, respiratory, brain, abdomen and no cause found.

A study covering a period of twenty years, from 1910 to 1930 made of all cases brought into the hospital dead, death in such cases occuring suddenly, was made public by Leeds Hospital of Liverpool, where it was found that in 198 cases, 144 deaths were attributed to circulatory organs, distributed as follows, 22 from aneurysm, 35 of valvular origin, 87 non valvulvar. Nineteen deaths were charged to disease of respiratory system, fifteen to disease of the brain, five to abdominal abnormalities and in fifteen cases no cause could be found.

Thus from these statistics it is seen that 72 per cent were due to cardiac origin and furthermore of this 72 per cent, 65 per cent of all those over 40 years of age were found to be due to disorders of the coronary artery.

Now Coronary Thrombosis, or as some prefer to state it, Coronary Occlusion is usually the first thought as for the cause of a sudden death.

Hammen, of Johns Hopkins, in 1934, offers a statistical review and summarizes by saying 91 per cent of sudden deaths due to natural causes are brought about by disease of the cardiovascular system, that is, myocardial degeneration, hemorrhage, arterial embolism and thrombosis, and furthermore that 65 per cent are due to disease of the coronary artery.

A report emenating from Rochester states that 46 per cent of sudden deaths are due to coronary thrombosis.

During the year 1924, in New York City there were 71,252 deaths. Of these 15,826 or 22 per cent were due to some form of heart disease; only four per cent of deaths from heart disease include those forms in which sudden death is liable to occur. This fact testifies that although heart is the most frequent and that the great majority of instant, sudden unexpected deaths do occur from some form of heart disease, yet statistics show that the number of such deaths as compared to the total number of cardiac deaths of a slow character is relatively small indeed. As just stated, only 4 per cent of cardiac cases die suddenly.

In chronic valvular diseases of the heart, with the usual degree of degeneration of the myocardium, death comes in the vast majority of patients, about 96 per cent, through a slow process, ordinarily accompanied by kidney lesions, dropsical effusions, great dyspnoea and other annoying symptoms. It may occur suddenly but not by any means unexpectedly, long periods of invalidism having already given the signals of a fatal outcome.

The laity feel, however, that whenever a diagnosis of heart disease is made, it automatically carries with it an order for a sudden death and nothing is expected except speedy action.

Perhaps we should remind you that occasionally in chronic fatty degeneration of the myocardium, when the patient looks well, feels fine, shows no severe symptoms, only a slight dyspnoea on exertion, the physical examination may reveal little if anything abnormal, and not necessarily is the patient fat, yet a sudden and unexpected death happens to such a case, in a limited numbed of instances.

In spontaneous rupture of the heart, such a termination is of course expected, but this condition is of infrequent occurrence, yet we must remember that in any damaged heart that intense emotion excessive physical exertion may cause a sudden dissolution and it may also be unexpected as to time and place.

Two and one half per cent of cardiac deaths exhibit the angina pectoris syndrome in some form or other, whether it be pain due to vascular distension or vascular spasm.

Syphilis of the aorta should not be forgotten as a potential factor in sudden deaths.

Respiratory sudden deaths are often accounted for by hemorrhage of lungs, particularly if coming from an artery, yet these are not as frequent as formerly, embolism of pulmonary artery is responsible for its share of fatalities, emboli arising in varicose veins of leg, sometimes from varicosities surrounding the rectum, often occurng post partum or post abortum, resulting from abdominal and pelvic operations.

Abdominal causes present themselves in rupture of the various abdominal organs, etc.

Allergic reactions though of alarming nature are only infrequently responsible for sudden deaths. Park, of New York, reports on a study of 350,000 administrations of diphtheria antitoxin in which sudden death occurred once in 70,000 cases injected. In 34 per cent of these deaths, a history was obtained of asthma or hay fever.

Thus it is seen that the total number of reported fatal anaphylaxis is much smaller than generally believed, and although the probability of a fatal reaction occuring is slight yet it must be considered.

Park concludes as follows, "Coincidentally with an enormous increase in the use of foreign serums and other proteins in the treatment of patients there has been a very marked reduction in the number of fatalities per unit of population treated."

No doubt all of us have noticed the almost simultaneous call to heart cases, at least within a few hours of each other, frequently after the occurrence of a sudden death in the neighborhood this seems to have an unfavorable influence on all cardiacs, since most of them expect and are apprehensive of the same end, it in some way reminds them of their fears.

Again we have all recognized that humidity has some effect on cardiacs. English physicians long ago stressed the idea that high barometric readings precipitated heart attacks, much thought was expended along these lines and in 1924 and 26 a study of weather records and vital statistics revealed that, quoting,

"Mortality from organic diseases of the heart, cerebral hemorrhage, and chronic nephritis combined is usually high when the temperature is low, and is noticeably low when the temperature is high.

The results of this investigation suggest patients who are especially exposed to the lethal effects of organic disease of heart, cerebral hemorrhage and nephritis should be warned of the universal dangers attendant on cold weather.

The above research was done in Chicago and is of some importance when advising patients with such ailments.

The shop worn labels of heart failure and acute indigestion are usually considered now as absurdities.

Appreciating the fact that it is next to impossible for the general practitioner always to assign the proper cause for a sudden death, and it is not always reliable when stated by a specialist unless concurred the pathologist concurs, yet with a little closer attention to our cases and close observation it is likely that an improvement will be made along these lines.

I am favorably impressed with the conclusion arrived at by Hamman, who closes a discourse with the following "The great majority of sudden unexpected deaths occur in certain forms of heart disease, but the overwhelming majority of deaths in heart disease are neither sudden or unexpected.

Perhaps the most frequent cause of all as borne out by the pathologists, when they report gross anatomic alterations are usually extensive disease of the heart muscle, commonly due to the obstruction of the blood flow in the coronary arteries.

American Public Health Ass'n.

The scientific program for the sixty-fifth annual meeting of the American Public Health Association, which meets in New Orleans, La., October 20-30 has been released, and appears in the publication of the September issue of the American Journal of Public Health.

MISSISSIPPI STATE MEDICAL ASSOCIATION
and
COMPONENT SOCIETIES

Poliomyelitis*

A REVIEW OF RECENT LITERATURE

JOHN W. SHACKELFORD, M.D., M.P.H.
Greenville, Miss.

It is now generally accepted that poliomyelitis is due to a filtrable virus. This fact has been established by investigators(1), who were able to make serial transmission of a filtrable infectious agent in monkeys. Rosenow, however, and his associates are still proponents of the neurotropic streptococcus etiology. The arguments for or against these theories will not be discussed, but only the filtrable virus will be given consideration.

The portal of entry and exist of the infectious agent is probably the upper respiratory tract, and under these conditions droplets of mucus and saliva are the important vectors of the infection. Aycock(2), has closely associated two outbreaks with milk. The virus of poliomyelitis passes from the nasal mucous membranes to the central nervous system by way of the olfactory nerve, olfactory bulb, and olfactory tract(3). After the entrance of the virus into the central nervous system, the infection apparently advances along the nerve paths, axonal routes, from the cerebral cortex to the thalamus, from there to the medulla, from whence it spreads rapidly to the spinal cord. It further appears that the infection is of an intracellular nature of individual groups of neurons rather than of a more generalized intercellular nature(4).

EPIDEMIOLOGY

The epidemiology of poliomyelitis is not unlike that of diphtheria. The greatest incidence is below 10 years(3). The ages 1 to 4 suffered most; 5 to 9 next; and 10 to 14 followed in the 1935 epidemic in Virginia and North Caronial.

Leake(6) (et al) found the three above groups were about equally affected in the 1934 epidemic in California. The 1935 Virginia-Carolina outbreak had its peak in August, beginning late in June and ending in October. The attack rate in North Carolina was 20 per 100,000, and in California in 1934 was 35. One of the highest rates ever reported was that in New York City in 1916 when the incidence reached 159 per 100,000(11).

PREVENTION

Following Brodie and Kolmer's announcement in 1934 of their development of a vaccine against poliomyelitis, much interest has been manifested both by laymen and by the profession. These investigators working separately have developed two vaccines against the disease. Kolmer's(7) vaccine is a 4 per cent suspension of virus from the cord of an Indian monkey. This virus is attenuated with a 1 per cent solution of sodium ricinoleate and 1: 40,000 mercurophen is added to maintain sterility. This investigator lays great stress on attenuation of the virus by chemicals and by remote monkey passage.

Brodie's(8) product is a 10 per cent virus suspension inactivated with 1 per cent formalin. This vaccine is dependent upon a rather delicate titrating of the virus.

Both vaccines are administered subcutaneously, or intradermally, as is recently recommended by Kolmer. Immunity reaches its height after three or four weeks according to Brodie.

Both of these workers have been able to immunize monkeys with their vaccine, and have been able to demonstrate anti-bodies in the blood of humans after inoculation. Schultz and Gerbhart(9) on the other hand, were unsuccessful in protecting monkeys with either of the vaccines. Viricidal properties were demonstrated in the blood of their animals but both groups developed paralysis following intracerebral inoculation.

Carefully controlled field studies have not been extensive enough to draw definite conclusions as to the effectiveness of these vaccines. Brodie(8) reports 7,000 individuals in endemic or epidemic foci without a case of the disease developing in the group after complete inoculation. Kolmer(10) reports nearly 11,000 immunized, mostly in epidemic areas, none of whom developed the disease after three doses of the vaccine. Ten cases of poliomyelitis, however, followed one or two doses of the latter product and two cases followed the former. Since the same lots of vaccine were administered to a large group of others with no untoward effects, Kolmer believes the affected individuals were probably in the incubation period of the disease at the time the vaccine was administered.

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*Read before the Section on Medicine at the Sixty-Ninth Annual Session of the Mississippi State Medical Association, Greenville, May 6, 1936.

Rivers(13) points out that it is doubtful if the viruses with which we have been able to produce satisfactory immunity as in rabies, yellow fever and canine distemper, have been completely inactivated. Perhaps this treatment with phenol, sodium ricinoleate, and formalin is in reality a diluent in that it completely inactivates most of the virus units while others are uninfluenced. The old Pasteur method of preparation of antirabic vaccine was a process of dilution rather than attenuation. Under these circumstances the most susceptible children, rather than the ones who are in most need of protection, could not resist the active virus in the vaccine and came down with poliomyelitis after one or two doses. Rivers further points out that "the presence of neutralizing bodies in animals following the administration of a particular antigen does not necessarily indicate immunity, as is the case in individuals possessing antibodies following an attack of the disease." Others(9) are in agreement with this. Since Brodie's vaccine is dependent upon a rather delicate titrating or measuring of a virus, which others have not been able to duplicate satisfactorily, it is possible that an overdose may be responsible for the disease and an underdose failure to produce immunity.

The fact that several cases of poliomyelitis have developed within 10 days following vaccine administration, and the limited knowledge of these vaccines leads one to question the safeness of the procedure. Leake(12) in his investigations cites 12 cases of paralytic poliomyelitis, 8 following one of the vaccines and 4 following the other. Of the 8 patients 6 died. The disease was not epidemic in any of these localities at the time of the occurrence of these cases.

In the light of these facts he suggests that it is undesirable to use further poliomyelitis virus for human vaccination. To further discourage one in immunizing against poliomyelitis, Root(14) brought out that the attack rate in North Carolina in 1935 was only about one in 1,666 children under 10 years. At this rate 1,666 children would have to be immunized to prevent one case of the disease.

The use of convalescent serum and parent's blood for passive immunization against poliomyelitis has been advocated. Stokes(16) (et al) was of the opinion that favorable results were obtained from their use. A close analysis of his figures would make one question their value. Kessel(17) (et al) found serum of no value in protecting hospital employees in California. Schultz and Gerbhart(4) found it of no value in protecting monkeys.

TREATMENT

In recent years the treatment of poliomyelitis with serums has received much publicity in medical literature. After Aycock and Luther's(15) favorable report in 1928 on the use of human convalescent serum in the preparalytic stage of the disease, much study was given this form of therapy in the 1931 epidemic in the northeastern states. Although no carefully controlled studies have demonstrated any significant value in serums, because of the viricidal properties of immune serums in vitro, because of marked subsidence of symptoms and rapid recovery frequently seen in individual patients following serum administration, because of no more promising method of therapy, and because of apparently good results obtained in small groups, hope has been held that some undetermined virtue might be held in serums.

Cowie(18) and his co-workers in 1934 reported a series of cases in which he states that of 80 cases who received convalescent serum or adult whole blood, 77 did not develop paralysis and in the remaining three, involvement was slight and recovery was complete, at the end of the month. Of "seventeen paralyzed cases who received no immunotherapy only 12 per cent improved, 89 per cent showed marked residual paralysis."

Park(19) reporting the results of observations on 927 patients in the 1931 outbreak in New York found "no statistical evidence of any difference between the serum treated and untreated patients with preparalytic poliomyelitis." An effort was made in this study to give convalescent human serum to alternate cases of the disease as they presented themselves for treatment. He notes that his conclusions are in keeping with those of Aycock and Kramer and their co-workers on 82 patients seen in Brooklyn and Hartford during the same year.

Henry and Johnson(5) found no advantage in favor of serum in a group of preparalytics in Philadelphia in 1932. Ninety-eight received serum and 100 did not.

Perhaps the most rigorously controlled therapeutic experiment in which unselected and as nearly as possible alternate patients received convalescent serum in the preparalytic stage is that of the Poliomyelitis Committee of the New York Academy of Medicine.

Fischer(20) analyzed the data on the two groups of patients, 477 treated and 102 untreated. The diagnosis of each of these was made on the basis of history, clinical course, physical findings, and pathological changes in the spinal fluid. Careful consideration was given to the factors of temperature, age of the patient, stage of the disease, and apparent seriousness of the disease at the time of the physician's initial visit. After summing up these factors and weighing one against the other, it was concluded that the groups were as nearly comparable as could be had. The outcome of the treated patients, both as to mortality and residual paralysis, in this study was no better than in the untreated group. In fact, the untreated group fared slightly better. This is probably not significant, however.

Schultz and Gerbhart(4) experimenting with monkeys found that the administration of rather large doses of specific immune serum as early as 24 hours after inoculation of the animals with the virus failed to prevent or modify in any significant degree the course of poliomyelitis. These investigators were of the opinion that immune serum does not appreciably modify the course of the disease, once the virus has been implanted in the nervous tissues.

Park(19) believes that no disease due to a filtrable virus is benefited by an antiserum after clinical symptoms have developed.

Certainly from the more carefully controlled studies we could not say that serum had any beneficial effect in the treatment, even of preparalytic poliomyelitis. Harmon(1) in his review of the literature on the subject brings out evidence that leads one to believe that most of the preparalytic cases are in reality nonparalytic cases, and that others are mild cases and for this reason exhibit a longer and consequently more often diagnosed 'preparalytic' period. Fischer(20) in reporting on the study of the New York Academy of Medicine made note of the fact that in his study group of 579 cases, the mortality was only 3.4 whereas in the city as a whole a mortality of 13.1 was recorded. This would tend to substantiate the opinion of Harmon. This analogy I believe will explain the results of Cowie and others who believe they have received beneficial results from serum administration.

CONCLUSIONS

1. The virus of poliomyelitis apparently enters the olfactory nerve endings directly from the nasal mucous membrane and thereafter is an intracellular infection and shielded from antibodies that may be injected into the blood.
2. Poliomyelitis is a disease primarily of children under 15 years.
3. The safeness and the effectiveness of the two vaccines is yet to be determined.
4. In recent epidemics more than 1,000 children would have had to be immunized to prevent one case of the disease.
5. There is no clinical or experimental evidence to substantiate the value of immune serum in the treatment of poliomyelitis.

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DISCUSSION

DR. F. M. ACREE (Greenville): You can readily see from this paper that the discussion does not leave you very much ground to stand upon. The serum has not proven to be of any benefit, neither has the vaccine, so that there is not a great deal that can be done in the acute stage. A doctor in Harvard University reports that it is rather a universal disease than a rare condition, and then we have some of the common colds which are really and truly attacks of poliomyelitis sufficient to give immunity and thereafter protect for the rest of life. There is not a great deal that can be done in treatment. We have no diagnostic tests to show whether a little child has poliomyelitis or not. I shall limit my discussion to the present day treatment at Warm Springs, Georgia. There has recently been discovered just south of Greenville a warm water about 8 or 10 degrees above that of Warm Springs, Ga., and because of the possibility of developing our section here and an institution for the treatment of similar conditions, I made a trip to Warm Springs, Ga., to see what they had and it was my pleasure to observe something there with reference to poliomyelitis. Most of those they have there have a mental condition accompanying it. Maybe they are possibly the only ones in town that have it; they seem to feel that they are so greatly handicapped that they can not carry on a useful life, and that gives them a mental condition that it is not difficult to understand. There was assembled there in Warm Springs, Ga., a group of one hundred, more or less, and I think I saw more smiles, I heard more whistling and singing than in any other group of a similar number. They were taught that they were not useless individuals; they were taught to use what was left of their faculties to the very best advantage and were to overcome their mental handicaps that go along with the physical handicaps, particularly where they are in an isolated position in the community. You take the average small town, there are not more than three that are crippled from it, and they are pointed out; they feel that they are, and they never associate with any one except those crippled to a like extent. This is being eradicated in that institution. Along with that they are treated muscularly, parts are exercised and manual training is given to do what they can with what there is left. It is lamentable that the serum and the vaccines will not serve. Dr. Bullock was very hopeful that he would be able to discuss this, and I believe that failure of it so far will not deter him from further efforts along that line.

DR. W. H. ANDERSON (Booneville): I do not want to take up over a minute, but I want to say first that the paper Dr. Shackelford has just read is a very fine one, and it reviews all the latest progress on the subject. Dr. Kolmer spoke before the Mid-South meeting in February on the subject and we were hopeful that he had succeeded with a vaccine that might cure the disease. I had two cases last year, one a little boy, four years old, and the other a girl of fourteen. It is rather difficult to diagnose a case of infantile paralysis in the early stages; one has to do it more or less by elimination. The little boy developed it early in both legs, more in the left than in the right. We gave him a blood transfusion. The girl lived out in the country about fifteen miles and had been treated for malaria for a week or ten days. A complication in her case was her inability to void. She and the boy are both still living, but both are crippled. I think we have all had an unusual interest in the Warm Springs Foundation, and certainly such an institution here in the delta sounds good. I have been asked, however, by Captain R. A. Burleson, of Muscle Shoals, who a year or so ago conceived the idea of erecting in that section a great hospital for treating infantile paralysis to present his plan before this association. The institution is planned to honor President Roosevelt for what he has done for the Tennessee Valley. Along with the hospital is to be erected a museum to preserve examples of Southern culture and progress, and a hall of fame to commemorate eminent Southern personalities. The Birmingham papers have been most cooperative in advancing publicity of the idea, which is not only being sponsored by Alabama, but by Mississippi and Tennessee jointly.

DR. V. C. TEMPLE (Hattiesburg): The doctor has given us a very comprehensive paper, and I feel that I am on very unsteady legs when making an attempt to talk about it. There is one more thing, though, that I should like to have you remember when you get your occasional case of poliomyelitis. Don't forget the importance of the early orthopedic management of these cases. Many of the severe after effects of this disease come from the neglect of the paralyzed limbs in the early stages. See that your patient is absolutely at rest and be sure that no affected muscle is allowed to be in any position that puts it on a stretch. Careful treatment during the active stage of the disease means less deformity later on.

DR. L. B. AUSTIN (Rosedale): I just want to let you know of my experience in treating poliomyelitis. For a great many years, I have been using a solution of creosote and potassium iodide in all septic infections. These cases of septicemia responded so well that I decided to carry out some experiments with this solution. I went to the State Penitentiary and persuaded Dr. McDavid to allow me to treat a number of cases of septic infection in that institution. Our method was as follows: we constructed an electric jacket completely surrounding the patient's chest. This was connected to a thermostat which kept it at a uniform temperature. We then injected the patient with a solution of creosote and potassium iodide every six hours and we kept the electric machine going continuously. We had such good results with this treatment that I decided to use it on the next case of poliomyelitis. This case was a minister's child, taken violently ill with a chill and high fever. I thought that it was a case of septic infection, so I gave him this injection. The following day, the patient showed symptoms of poliomyelitis, and I continued the injections for a few days, and the patient got well, but of course, he had paralysis of some of the muscles of his leg. Since that time, I have treated every case I have had by this method.

Diagnosis And Treatment Of Influenza-Pneumonia*

JOSEPH E. GREEN, M.D.
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I fully realize that as a rule essayists appearing on various important medical programs are usually expected to bring something new. However, I have no apology to offer at this time for discussing "Diagnosis and Treatment of Influenza-Pneumonia," because it is a problem that every physician must contend with every year and it is also true that the general practitioner in the country usually is equally successful and possibly more so in treating influenza-pneumonia than those in the medical centers where every diagnostic and therapeutic aid is available.

The question of the cause of influenza is still a debated one and since Pfeiffer first announced the discovery of influenza bacilli and after all the laboratory work that has been done and since the la grippe epidemic in 1889-90 and the influenza epidemic in 1918--19 and 1920, it is generally accepted that the influenza bacillus is the principal causative factor.

Most of us doing general practice must depend on the research laboratories for a great deal of our information. However, in treating influenza-pneumonia we have an entirely different picture from that of ordinary broncho- or lobar pneumonia.

Personally, I think we should adopt the teaching of our lamented friend, Professor Stanford E. Chaille, at whose feet many of you sat when trying to qualify to be a physician. I recall distinctly one day while he was lecturing to a class that he made the following remark, "Young gentlemen, if I had my way I would get rid of a lot of these new fan dangle names and go back to the good old terms used when I was a young physician. In those days we simply said 'gut', now you must say 'intestines;' then we said 'belly,' now you must say 'abdomen'." And he enumerated a great many other terms which possibly some of you remember and finally closed by saving that if he had it in his power he would put those good old names back in good society. For the sake of brevity I shall discuss this subject as "flumonia" because that term suits the findings better than any I know. Of course the name, "flumonia," you cannot find in the dictionary but I see no reason why we can't coin a word occasionally as well as somebody else.

The picture of "flumonia" is just different from that of bronchial or lobar pneumonia but fortunately it is a condition that the physician usually discovers early because in an influenza epidemic we are constantly on the lookout for complications and one of the most common among them is pneumonia. In the recent epidemic throughout my section this was a very common complication, usually beginning from two to seven days after the initial attack of influenza. The patient apparently would be making a satisfactory recovery and too often would get up thinking that he could soon be back at his usual vocation but the exertion was too much and often he returned to bed complaining of vague pains especially at the base of the lungs, chilly sensations, nausea, vomiting and temperature of 102 to 105°. The blood picture in these cases varies. One type will possibly have a leukopenia, another a marked leukocytosis of from 30,000 to 40,000. It is always a good sign so far as my observation goes to find a marked leukocytosis and of very bad prognosis to find a normal or sub-normal leukocyte count In going over the lungs with your stethoscope you will not always find creptant or sub-creptant rales and probably with the next case you may find numerous moist rales throughout the lung area but the breathing sounds can be heard over the entire part of the lung where the foci of the trouble is located. Bronchial breathing may or may not be present. This, too, in some cases is very marked and in others not noticeable. Percussion of the chest shows a distinct dullness over the affected area.

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Cough is usually severe and there may be sputum streaked with blood or of the typical prune juice type. Patients will talk at random, constantly rolling and tossing from one side of the bed to the other with a staring far off look, dry parched lips, rapid respiration rapid pulse, but in many cases we are surprised to find the respiration normal and pulse practically normal or just the opposite to that we expect to find.

I usually explain it to the patient that the lung presented the same picture as the old yellow pine tree that had fallen in wet ground and after years of exposure if we decided to manufacture it into stove-wood we would find probably thirty per cent on the top of that log that would burn but the other two-thirds would be water logged and must have time to be exposed to the sunshine and air before it is much use for fuel. So it is in "flumonia." The bases of one or both lungs are congested, inactive, and in many cases become a liability so far as life is concerned rather than an asset and the upper part of the lung must carry on until the physician through proper care can try to restore the diseased parts to normal.

TREATMENT

The thing that concerns all of us most is what we can do to get the patient well because we are all jealous of our reputations as physicians, and if those whom we treat recover the folks will declare we are great doctors although many times they get well in spite of our treatment rather than from it. Treatment of "flumonia" is placed under three distinct heads: (1) absolute rest; (2) food and fluids; (3) medication. All of us who were practicing in 1918-19 and 1920 remember how our patients died in alarming numbers and everybody was trying his best to discover some way of lowering his mortality and it is generally agreed that the high mortality was due to over-crowding, too little fresh air and too little food and fluids. The patient should be placed in a well ventilated, quiet room and this is very important. The windows should be kept open both day and night but the room should be kept warm and the patient should be placed where there will be no draft on the body. The physician should take charge of the family and the visiting neighbors, and organize his forces at once. If it happens to be in a rural home, select some intelligent people to do the nursing and place a "no visitor" sign on the door. The patient should be kept away from noise such as cranking of old "T" model fords or any other kind of outside noise and barking and howling dogs, neighborhood children gathering and playing on the outside, and people congregating to "set up." Sitting up with country people, especially in the homes that have pneumonia, have killed more of them than anything I know.

FOOD AND FLUIDS

It is my candid opinion that if we observe the first rule as to quietness and then see to it that sufficient liquid or soft diet is gotten into the body we have won ninety per cent of our battle, for rest, quietness with plenty of fluids given, gives a better prognosis than resorting to medication. The physician should have a heart to heart talk with his patient, if his mind is clear enough to understand what he is trying to put over. I would not hestitate where I think I have an unruly patient to deal with to tell him his exact condition and assure him that if he will take the nourishment and fluids brought to him as directed by the physician, in all probability he will get well but on the other hand if he persists in refusing to obey the physician's orders that there will probably be slow walking and low music and he will be at the head of the parade and not know it. I find if he gets this firmly impressed in his mind and even later if he becomes delirious that he will carry out the doctor's orders. Of course where it is possible a trained nurse should be in charge of the case but in the majority of these cases this is impossible. The physician should realize that the high fever is burning up the nervous energy and dehydrating the body and if sufficient fluids are not given the prognosis is bad. At least four to six ounces of carbohydrates should be given in the form of simple Karo syrup, dextri maltose, beta lactose, or any similar product. It can be given in orange juice, lemon juice or any other fruit juices and can be flavored by adding a small amount of whiskey.

If the stomach rebels against fluids then they must be gotten into the body either through hypodermoclysis or as a last resort, intravenous drip, using the isotonic salt solution and if there is a marked acidosis, add Hartman's solution. Do not give glucose intravenously in "flumonia," however, it is permissible by hypodermoclysis.

MEDICATION

Last and least, medicine, counter-irritants, vaccines, etc. No medicine is indicated except for the relief of pain, such as codeine and pantopon; mild purgation, minute doses of mercury followed by laxatives, but the patient should not be over purged. Codeine can be added to any of the various expectorants, cough mixtures, however, I think we should not attempt to control the cough too much or keep the patient too quiet in bed because through rolling and tossing the patient constantly changes position which is very necessary and in the constant coughing nature is trying to keep the bronchial tubes free from mucus so as not to interfere with aeration of the lungs. If the pulse is thready with little volume heart stimulants should be used. Personally, I like 2 c.c.. of digilen given by needle every eight hours. Strychnine, caffeine, sodium benzoate and camphorated oil in large doses have also apparently been useful in many cases. As a rule the old schooled practitioners used plenty of counter-irritants but the younger physicians use none. Personally, I like mustard plasters made strong and left on until the skin turns red, then removed and camphorated oil applied. Reapply when skin regains normal color. Vaccine and serums in all shapes and forms have been recommended by some as specific and condemned by others as absolutely harmful. Personally, I think I have gotten good from some of these vaccines and in other cases they were probably harmful or of no value. Last but not least, oxygen. Most of these cases die because the diseased lungs are not able to get enough oxygen to the blood to combat the toxemia, high fever, etc., and common sense teaches us that oxygen should have a big part in the treatment of "flumonia." Unfortunately the equipment and cost of operation makes its use prohibited in a large number of cases. The oxygen tent such as put out by the Ohio Chemical Company seems to be the ideal method of administering oxygen. After the patient is placed under the oxygen tent the nurse should be instructed not to go into the tent except when absolutely necessary. Some of our best physicians take the position that after a patient is placed under an oxygen tent that the "flumonia" will not continue to spread to other areas of the lung and although I have had limited experience with the use of oxygen, personally, I think this is true. In stout, robust men or women who developed "flumonia" following influenza I think the oxygen tent is almost indispensable and if placed under the tent early enough it will lower our mortality rate possibly thirty to fifty per cent.

SUMMARY

The diagnosis is usually easily made because influenza-pneumonia follows an initial attack of influenza. Treatment consists of fresh air, rest in bed in a quiet room. Give foods and fluids externally, internally and eternally, then if you want to do something else give some more nourishment and more fluids. Of course, I do not mean by this that the body should be water logged, but it is so essential and so necessary that I do not feel that we can emphasize it too much. See that elimination is maintained at all times. Give mild laxatives but not strong purgation. Give heart stimulants that have proven most successful in your practice but it is bad practice to give some three to five different stimulants at a time expecting that they will tide the patient over the crisis. Counter-irritants in the form of mustard packs or dry heat properly applied certainly gives the patient some relief and I believe they are helpful rather than harmful. The giving of oxygen to these patients certainly gives them a better chance to get well. Especially men and women of the stout, robust type, should if possible be put under an oxygen tent at once. Although the cost is high it is usually cheaper than a first class funeral.

DISCUSSION

DR. R. B. CALDWELL (Baldwyn: When I was asked to discuss Dr. Green's paper, I thought of what a little boy said to me when I was guying him about his school teacher. I was telling him that his teacher didn't know anything, and he hung his head and said, "Hell, he knows what I do not know." And I feel that Joe knows all that I do not know about "flumonia" and I do not know very much, but I do know that it will kill quick.

As to the cause of "flumonia" I feel that Dr. Green, or Dr. Chaille and most every one else knows that there is a lot that we would like to know about it and this we all know that it is a very treacherous disease and that it is dangerous in every stage and no one can tell when a case is well.

I very heartily agree with Dr. Green that influenza-pneumonia is a picture difficult from broncho pneumonia, and that no one should be mistaken in the diagnosis, but I find two types and there is a distinct point that I would like to mention and that is in some cases we have as my honored professor, the late Dr. Frank A. Jones, once said, just a bronchial storm and call it anything we wanted to, but most of them would die. This is usually a low temperature type, when within two or three days the mucopurulent sputum is formed faster than it can be thrown off, and they simply drown in their own secretions or smother to death. This is found mostly in old people and you can find every sound that you are looking for in the lung except a normal breath sound and if you have only one lung involved the next day you can find it in the other, and by the next you have the march that Dr. Green describes.

The other is the dry type that we have, with nose, mouth, throat so dry they can't cough off anything if they try and usually they do not cough and are very delirious and refuse all fluids and food. There is dullness in the lung and you have breath sounds and dullness and maybe only a small part of the lung is involved, and I have never had both lungs involved in this type.

As for vaccine treatment, of course, every one has his own way of treating these cases, and I have tried all that I have ever heard of and see the parade just the same. For the last winter epidemic I found this outline gave me the best results: thoroughly cleanse the intestinal tract with oil, give codeine to ease pain and ten per cent glucose in saline in the veins, at least 1000 c.c. each 24 hours, and continue as long as needed. In seven cases that I had I did not have a parade. I pushed all the fruit juices such as lemonade and orangeade and the dryness soon melted away and when I have this infection this is my request for treatment to be used.

One other remedy that Dr. Green did not mention is to fill these patients full of citrate of soda to dissolve the secretions and I have used it till they are dead and all that I can say that it did for them is that they died full of citrate of soda.

I thank Dr. Joe for this paper and hope you will all remember what he said. I agree with him in all but giving the glucose and saline, and I want it in the veins, and there are so many houses putting it out in ready-to-give containers that anyone can use it, at any time, and many lives can be saved by using it freely.

Dr. W. H. ANDERSON (Booneville): I wish to congratulate Dr. Green on this splendid paper on "flumonia." It is safe, sound, and practical. You may follow its teachings and fear no evil. What I shall say is mainly by way of commendation and emphasis. The name, "flumonia", is most applicable. The purity of the war time "flumonia" may be judged best perhaps by the total leucocyte count, the normal count, or oftentimes a leukopenia. The diagnosis is not always so easy due to the variety of symptoms and the degrees of severity. Rest is of the greatest importance as emphasized by Dr. Green. Rest in bed in the beginning, in the middle of the attack, and at the end of the disease can not be over emphasized . The length of time in bed is to be determined more perhaps by the soundness of all the body organs, their ability to function, and their energy reserves, than the severity of the attack. For example the over worked business or professional man with a rheumatic background and a weak heart muscle to begin with must have a longer period of rest than the average young moderately active farmer. Too much purgation in the beginning may prove very injurious, especially in homes where conveniences are limited. Chilling and exertion may cause a pneumonia to develop on the "flumonia", or a something to take place that leads often to death and very commonly to pus formation, empyema. Water and liquid foods are very important, butter milk or Bulgarian milk and orange juice are very good. Codeine and pantapon for rest are most helpful in many cases. Hot baths and alcohol rubs are helpful for the temperature and for rest if the surroundings are suitable and safe. We do not give digitalis as a routine. We have had no experience with an oxygen tent. We used oxygen by needle under the skin in one case in which we felt like some help was obtained. No case of "flumonia" should be treated lightly. We thank Dr. Green for his paper.

A MEMBER: I enjoyed this paper and the discussion. It is certainly a subject that has entertained us this winter and on a few occasions previously. Unfortunately, in my section the epidemic of influenza we had was delayed until in March and April. I determined when this epidemic came on, if it was a farm hand, business man, housewife or whoever it was, when I was called to attend a case of influenza that they were going to bed and stay there. As a result I have had the fewest number of cases of pneumonia, I have ever had in any epidemic of influenza. They would ask me how long they had to stay in bed, and I told them until they were well; that was sometimes 10 days or two weeks. I believe it is a matter of more importance to prevent pneumonia than it is to wrangle on the methods of treatment. If I was to select medicines to use, I think they would be magnesia, codeine and digitalis, unless it was one of our modern fellows that is trying to drink up all the liquor that is being handed out. I would in no instance give any one one drop of whiskey. You are upsetting the stomach that is going to need all the nourishment possible before your attack of pneumonia is over.

DR. B. H. BOOTH, (Drew): Joe Green, as he always does, has given us a good paper. He has outlined a mighty good treatment, except that he knows as well as I do that almost all of our patients who die from any form of pneumonia, whether it is lobar, broncho-, or "flumonia," die because the doctor doesn't do as one of our old professors did. You need to pursue a course of masterly inactivity, and I am reminded of that from my medical service in the war. We had so many cases of "flu-pneumonia" that they got no attention and consequently our mortality rate was exceedingly low.

I want to object only to one statement that Joe made in his paper, and that was as regards keeping the room warm. I think you want to keep your patient warm, but you want to keep your room chilled. You do not want your patient in a warm room, and I think that is the reason that the army's mortaliy for pneumonia was much less than it is in these peace times, because of the fact that in peace time they have hospitals that they can keep warm and the hospital tents could not be kept warm by any stretch of the imagination, and if you will do what I am sure Joe does in reality, treat the patient less, your mortality will be still lower.

DR. CHARLES W. PATTERSON (Rosedale): I wish to state a few facts once mentioned by Dr. Elliott, Sr., of New Orleans. Dr. Elliott suggested the idea, way back in years past, that "flu-pneumonia" had the effusion intercellular instead of intracellular. So that is the reason you might have a pneumonia, and yet have dry lungs, and probably a diagnosed pneumonia and in 24 hours the case of pneumonia is well, or within 24 to 48 hours you might come back and find moist rales scattered over the lung, which is an edema. In about a few hours more you would have one of those funeral processions. That is one point I would like to stress. In other words, first there is an intercellular effusion causing the dullness and symptoms of pneumonia, which will clear if the effusion is absorbed. If it is not absorbed, edema occurs with blood streaked sputum, and death follows in a few days.

DR. D. W. JONES (Jackson): Bearing in mind the extracellular, or extralobar pathology in the "flu-pneumonia" cases, I would like to add a word of caution as to the prognosis.

I like to explain to my pneumonia cases that the natural history of the disease (true pneumococcus infections) is such that the patient may be expected to be worse from day to day, as the air-cells fill up, until about the seventh to ninth day, when we may expect a "crisis," after which resolution sets in with a rapid convalescence. This comforts the family and may save the loss of your patient to some other doctor. But such a prognosis cannot be made in these "flu-pneumonia" cases, and it is unsafe to predict any sort of crisis or set any time for recovery. The prognosis is good, but no definite time can be set for recovery. You are liable to be badly discounted if you predict any such time.

A MEMBER: I want to thank the doctor for this paper. There is just one think I would like to ask. I have had my share of this "flu-pneumonia." I have been giving oxygen for the last two epidemics, and you can get an oxygen tank in most filling stations. I have used commercial oxygen. Some don't think is is good. You can take a tank of oxygen, take your rubber tube and pass it through a bottle of water and then into the posterior nares, so that if the breathing is through the mouth or through the nose, you can regulate your oxygen by the number of bubbles coming up through the water. I have used it with very satisfactory results.

DR. LEON S. LIPPINCOTT (Vicksburg): In this condition as in any disease, I think we ought to consider the cause and what is going on in the body. Now I don't think anyone knows definitely what influenza is. We do know that it is a disease that knocks the patient down and breaks his resistance to many organisms. In the epidemic of 1918, I think that most of the pneumonias following influenza were due to streptococci but we do not have to have a streptococus pneumonia following influenza. It may be due to the pneumococcus and admittedly lobar pneumonia. If you know what the causative organism is it will influence your treatment. The general treatment for pneumonia is the same, but there is a serum treatment for pneumonia due to pneumococci and the results of its early use are just as spectacular as those following the giving of antitoxin in diphtheria.

We used to have four types of pneumococci. Type IV. has now been subdivided into many more types. Early a serum effective in pneumonia due to Type I pneumococci was developed. If given early and in adequate amounts, it very promptly brings the temperature down. It may not stay down, but if when the temperature begins to rise again more serum is given and the procedure continued, in two or three days your patient is on the road to recovery. Since then a serum for Type II pneumococcus infections and more recently for Types VII and VIII infections have been worked out and apparently give good results.

We have seen some of these so-called influenzas or severe colds, and we have had pneumonias following them. Probably about half have been due to pneumococci this year. Five or ten years ago we rarely saw a pneumococcus pneumonia. But pneumococcus pneumonias are here now. We have had good results from the serum treatment.

Expensive laboratory equipment is not necessary to determine pneumococcus types. All you have to have are type sera, glass slides and a little sputum. You mix a little sputum with each type serum on the slides, cover with cover glasses and look at them under the microscope. In the preparation with the serum type of the pneumococci present in the sputum, the capsule of the pneumococci will swell and become distinct. With a little experience results are very definite. All this can be done in a few minutes. Of course, the particular pneumonia may not be due to a pneumococcus of any type.

I think if you will look for pneumococci you will find them in a considerable number of cases and if you use serum in proper cases you will get pleasing results.

DR. GREEN (Closing): I want to thank the doctors for the discussion, and I am one of these boys who can always take it. Regarding what Dr. Caldwell said of the glucose, saline intravenous drip, I am strongly for that stuff. I believe in it. I know blood transfusions are good, but I have seen patients killed because the fellow making them simply made a mistake. I believe in the glucose and saline but the best authorities that I have consulted say not to give it. They may be wrong, I don't know, and Dr. Caldwell has gotten results in the cases using it but I give it to every case but that is because it is a great life saver.

Now in regard to what Dr. Smith said about the giving of oxygen. I have not used it so much, and I tried to get in touch with the best internists in the South and they told me that a tent was the most ideal way to give it.

During the past winter we had a number of cases in large robust men that in my judgment would have died had it not been for the oxygen tent.

I want to urge you fat doctors if you ever go down with pneumonia to get some place where oxygen can be administered and don't wait until you are dead to begin but get under the tent early and stay until temperature has been normal twenty-four hours. The expense is rather high but after all it is not as expensive as a fairly decent funeral.

Remember if you don't feed and give fluids freely that the patients are almost sure to die, regardless of what else they may do.

Management Of Syphilis From The Standpoint Of Public Health*

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INTRODUCTION

Perhaps no subject today intrigues the mind of the public health administrator as does the solution to the problem of syphilis. There are few public health problems with so great an array of weapons for its attack and so dismal an approach to its solution as are found in this disease. The present attitude toward the problem is one of apathy. Because of the fancied futility of accomplishments, we have elected to ignore the problem. As a matter of fact, we are inclined to concentrate our efforts with much accompaniment of publicity on reducing the irreducible minimum in the prevalence of other communicable diseases while syphilis stalks in our midst like Hamlet's ghost.

PREVALENCE

If the truth were only known it is probable that syphilis, which receives but passing notice, would out-rank in prevalence all acute communicable diseases combined. The Twenty-Ninth Biennial Report of the Mississippi State Board of Health shows for the period 1933-34 that 23,016 cases of syphilis were reported. The State Hygienic Laboratory's report for the same period shows 76,272 Wassermann tests made with 23,410 positive results. It is impossible to analyze this data because it is not known whether or not these are new cases, old cases with duplicate reports or cases with repeated serological tests. In any event, in the light of the following surveys, it is not a true picture of the problem. In the Rosenwald study in Mississippi it was found on random sampling that 23.5 per cent of the negro population had syphilis. A recent study by routine blood Wasserman tests on apparently healthy individuals applying for jobs in canning plants in Mississippi showed that 21.1 per cent of the negro and 2.41 per cent of the white applicants had syphilis.

The commonness or prevalence of a disease alone is not sufficient grounds for instituting active control measures. To qualify for serious consideration as a public health problem a disease must be significant from the standpoint of morbidity and mortality. Unfortunately, no accurate data is at hand concerning these conditions for Mississippi. This state of affairs is due to two factors; first, morbidity reporting is done numerically, and there is no check on duplication of cases, and secondly, mortality reporting seldom states the primary cause of death.

Osler's studies on the causes of deaths in the 1915 report of the Registrar General of Great Britain is significant and can be roughly applied to Mississippi. He estimated that 18 per cent of the deaths due to disease of the nervous system and 13.4 per cent of the deaths due to the disease of the vascular system were primarily syphilitic in origin. If these percentages are applied to like catagories in Mississippi and the number of deaths primarily listed as lues are added, it is found that 842 persons died of syphilis in 1934. This is 3.9 per cent of the total number of deaths. Osler estimated that lues ranked first instead of tenth as the principal cause of death in Great Britain. If this be true in Great Britain, it is certainly true in Mississippi with her large negro population.

European countries have a better system of registration than we have and their data is more significant than ours. Boeck, while director of the Oslo clinic from 1891-1910, did not believe any treatment was satisfactory and did not treat his cases except symptomatically. In 1925-27 Bruusgaard studied Boeck's cases and obtained the following data: 23.1 per cent of the cases had serious and often fatal end results; 12.2 per cent had late but not fatal lesions; 64.9 per cent had no inconvenience from their disease, lived an average span of life and usually died of other causes and 27.9 per cent of the latter cases had a spontaneous cure. Expressed differently, 23 per cent of the cases had late lesions which incapacitated and caused death, 12 per cent had late benign manifestation and 64 per cent went through life unharmed.

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*Read before the Section on Hygiene and Public Health at the Sixty-Ninth Annual Session of the Mississippi State Medical Association, Greenville, May 6, 1936.

BACKGROUND FOR CONTROL

Not only must a disease have a high incidence and a significant morbidity and mortality rate, but it must be amenable to practical control measures to merit public health consideration. In syphilis the etiological agent is known, the modes of transmission are known and we have a cure for the disease in-so-far as its infectiousness is concerned. Very few diseases have the potentialities for public health control measures that syphilis has.

Syphilis has much in common with tuberculosis. The solution to both problems is a matter of isolation and treatment. When work was started on the problems of tuberculosis the outlook was indeed gloomy. Even today the problem is far from being solved yet there is no decline in the drive against the disease. Large sums of money are spent on case finding and hospitalization, all of which is justified. The same principles and practices applied to syphilis will reap equally as good a result.

GENERAL CONTROL MEASURES

To inaugurate a program of syphilis control, much ground work must be laid. First, there must be legislative enactment of enabling statutes. The present state of legal confusion concerning syphilis must be clarified. A blanket grant of power to the State Board of Health to deal with this disease as is done in the case of other communicable diseases must be made. Where necessary, changes should be made in the privileged communication statute to permit a better system of case reporting by private physicians, for without case reporting, no program can succeed. There should also be enabling acts to permit boards of supervisors and city councils to appropriate funds specifically for this program. The police powers of local governments to abate social nuisances should be strengthened.

Due to the magnitude of the problem and following the leads established by the subdivisions of tuberculosis and malaria control, there should be created a subdivision of venereal disease control in the Division of County Health Work and Epidemiology of the State Board of Health. A full-time supervisor should be placed at the head of this division. The first duties of this department should be to study the situation, preferably with the aid of the U. S. Public Health Service and other interested agencies, and to promulgate policies and practices. The second duty of this department should be the organization of local services and the supervision of the program. The third duty of the central office should be to conduct an educational program.

It is apparent to the student of the problem that any attempt to control this disease will succeed or fail depending upon the result of the educational program. There is a need for graduate study in syphilology for the private practitioner similar to the present program in obstetrics. A traveling lecturer will do much to standardize methods of diagnosis and treatment. In college, and perhaps in high school curricular studies, the question should find a place in sociology, biology and allied subjects. A concerted effort should be made to bring the problem to the attention of the general public. A news letter service to physicians and key citizens in every community is a possibility worth investigation.

SPECIFIC CONTROL MEASURES—DIAGNOSTIC SERVICE

A diagnostic service for the benefit of the private physician is and should be an important item in the control program. The principal diagnostic service to the private physician is laboratory aid. The Wassermann test service of the State Hygienic Laboratory has long been an aid to the physicians of Mississippi. The serological tests should include both the complement-fixation and one of the flocculation tests to obtain the highest possible degree of sensitivity and specificity. The delayed dark field examination is a possibility worth trying. It is highly important in primary sero-negative lues, but it calls for great care in preparation and interpretation of the material.

A highly desirable adjunct to the diagnostic laboratory service is a district consultant. If a clinic program is executed it should be by districts with a specialist in syphilology as supervisor. He may be either a traveling supervisor for a group of local clinics or he may be the chief of a district diagnostic clinic. The latter seems more desirable. The services of the district consultant should be available to every private physician for his private practice as well as any public practice that he may do. The organization and function of a consultation service will depend upon the local clinic organization.

As previously stated, the control of syphilis depends in a large measure on the treatment of the disease. Before proceeding with such a program, one must decide whether or not the aim is to render a case non-infectious and safeguard the public's health or to pursue the case to its complete cure and prevent the late catastrophes of the disease with its social and economic end results. The first course is the cheaper at the start but the second course is cheaper in the long run.

TREATMENT PROBLEM

The method of handling the treatment problem in syphilis has provoked much thought and controversy. The psychological aspects of the problem demand privacy in treatment. For this reason it is recommended that a venereal disease clinic be an integral part of a hospital service rather than a distinct and highly publicized unit. Such a plan is possible in a large city but it is not practical in a rural community. Some sort of state subsidy to private physicians would be the better plan for a rural community. Such a subsidy could be either the grant of free drugs, a case fee or a basic yearly grant. Of course the purpose of the subsidy would be to enable the physician to handle the cases normally occurring in his practice or those cases in which he is the family physician. Such a program would maintain privacy and hold the cases in the realm of private practice.

While there are many favorable aspects to the subsidy idea, it has the great disadvantage of being the most costly of all programs even though the subsidy be small compared with a regular fee. The most economical program is the local clinic plan. There are several possible organization plans for a local clinic ranging from a full-time staff to a volunteer staff of local physicians. As the private physician plays a major role in the program, some type of the latter plan would be the better.

In any plan of organization it is preferable to have the clinic proper conducted as a division of the local health department. The quarters, equipment, supplies, and nursing and clerical personnel should be the responsibility of the local health department. The staff should be composed of the local private physicians. The staff selection may be by official appointment, society selection or a volunteer service.

The appointment method of staff selection should be along the lines of State Board of Health selection of part-time health officer. In those counties with no full-time health department, the part-time health officer could act as the clinic director. Where the staff is appointed, the tenure of office should be for one year. Such an arrangement will provide opportunity for rotating the office among the private physicians.

The staff of the local clinic may be selected by the local medical society. The medical society may select one or more of its members to serve on the staff either simultaneously or in rotation. Depending upon the viewpoint of the society members, the selection may be from applicants for the position or a delegation of the responsibilities to the members in rotation of the service. This may or may not be a satisfactory method of selection depending upon the interest of the members and the pecuniary consideration attached to the office. Where the local society is interested in the problem and is willing to cooperate, this or the following plan is preferable to the appointment plan in so far as it will be a sharing of responsibility and an avoidance of unpleasantness.

The volunteer plan does not differ materially from the society selection plan, except that rather than the appointment of the staff by the society as a whole, the society volunteers as a group and the group as a whole constitutes the staff. In this plan the president will be the chief of staff and will schedule the service of the various members for the clinic.

It is obvious that while volunteer service for the clinic staff would be the most economical plan, nevertheless, physicians cannot sacrifice the time from their private practice nor have they the desire to do so. To make the program effective and at least partly interesting to the private physician, the clinic service should carry some stipend. If the staff is selected by appointment and the office designated as a part-time assistant health officer, it should carry the usual stipend of this office. If the staff is selected by one of the other two methods, they should be compensated on a fee basis; either a flat clinic fee or a small case fee.

A local clinic could care for the routine diagnostic and therapeutic services, but there will be many cases both diagnostic and therapeutic, which should have more consideration. For this purpose and to provide regional supervision of the program, there should be established district clinics with a full-time syphilologist in charge. The district clinics should be equipped with all necessary apparati for diagnosis, including x-ray equipment and laboratory facilities. These clinics should be centrally located in respect to the local clinics served and should be easily accessible for cases referred to them. It may be desirable to arrange such clinics as a part of established community hospitals.

In addition to the local and district clinic organizations, provisions should be made for hospitalization of indicated cases. Naturally, the mental cases should be sent to the mental hospital. The several state charity hospitals should have facilities for handling cases needing hospital care and treatment of a nature impossible to administer in an out-patient department. In this connection the district clinics could act as an admitting office and screening device to prevent overloading and case dumping in the hospitals.

Theoretically, there should be no system of selection of cases in a syphilis control program. From a practical standpoint, however, there must be some criterion in the selection of cases or concentration of effort. The aims of the program should be twofold: first, care of early syphilis and second, the prevention of spread of infection. To achieve these two aims, efforts should be concentrated on antepartum, prenatal or heredo-syphilis and early lues, especially the early lues in the young adult age group.

The method of accepting the clinic clientele naturally falls into three divisions, namely, personal application of the case, reference of the case by a private physician or a combination of the two. The former method has the advantages of simplicity, greater spread of service and the strength of police power in recalcitrant cases. However, it is open to criticism from the private physician in that such a method may, and frequently does, infringe on the rights of the private practitioners. The methods of reference by private physicians has the advantage of close cooperation between the program and private medicine. This is important because without the aid of the private physician the program cannot go far. On the other hand many apprehended cases of the disease will not secure applications from physicians, and the system is complicated when cases arise outside the practice of the private physician. A combination of the two systems would be the most desirable practice.

STANDARD TREATMENT

In a generalized program of treatment in which many private physicians are participating, it will be necessary to have a uniform system of treatment. It is suggested that the system of treatment advocated by the U. S. Public Health Service be used by the clinics.

EPIDEMIOLOGY AND SOCIAL SERVICE

The handling of the cases has been emphasized because this seems to be one part of the problem which is blocking progress of the program, but no less important is the item of epidemiology and social service. However, these two services have been tested and developed in other fields and the principles are readily applicable to the control of syphilis. The only adjustment necessary will be those incident to the psychological aspects of the problem.

In a rural community it will be possible for the local health department to do the epidemiological work with but slight augmentation of its staff. The basic principles of the epidemiological program can be patterned on the investigation of source and spread contacts in tuberculosis. The epidemiological program should be concentrated on the cases of early lues. The period of muco-cutaneous relapse or the infectious period of the disease is greatest in early lues. The epidemiology of late lues is not only time consuming and consequently expensive but it is limited in success and of doubtful value in the control of disease transmission. The regular nursing staff can be used to advantage in the investigation of syphilis.

Social service is more important in the control of syphilis than in any other disease. This is due to the common practice of concealing infection and the nature and expense of treatment. The service should be offered to the private physicians. The social service division of the program can be easily delegated to the regular nursing staff of the local health department in a rural community.

It is obvious that the success or failure of any type of syphilis control program depends in a large measure on whether or not one has a full-time health unit in a county where the program is inaugurated. Like in other public health services, the local health department is the tactical unit. To have every county in the state organized is "a consummation devoutly to be wished."

Even though the state is not completely organized, neither is the success of any type of program absolutely assured. Much pioneering is necessary. The anticipated program can be inaugurated in those counties which are organized at present, and the "wrinkles" ironed out. Afterwards, the principles and practices evolved can be applied to unorganized counties, perhaps with some necessary modifications.

The cost of such a program can be conservatively estimated at five cents per capita per year or $100,000. The program should be begun in the full-time counties and $25,000 should cover the initial cost. Be it noted that this expenditure at the peak is only 62.5 per cent of the present expenditure for tuberculosis control by Mississippi.

SUMMARY

1. Syphilis is a major public health problem in Mississippi but no active steps are being taken for its solution.

2. The solution to the problem depends upon established principles of epidemiology and treatment. An analogy and precedent has been

established in the matter of tuberculosis control.

3. A cooperative program between the private physicians and health authorities is essential and type plans of procedure are offered.

4. The estimated cost where the program is coordinated with an organized health unit is conservative and below the cost of the present expenditure for tuberculosis control.

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DISCUSSION

DR. F. MICHAEL SMITH (Vicksburg): In discussing this most admirable paper, wherein there is so much to commend and so much that richly deserves unstinted support in view of erstwhile ineffectual efforts to control or abate this gigantic public health problem, it seems very unkind and undiplomatic on our part to confine our comments to those things we do not find either faith or reason to accept.

However, those trees that bear the most luscious fruits have been known to fail, "All for want of pruning." So our spoken reflections are but kindly thoughts however uttered.

First, under "Treatment Problems" the essayist has stated "In any plan of organization it is preferable to have the clinic proper conducted as a division of the local health department. The quarters, equipment, supplies, and nursing and clerical personnel should be the responsibility of the local health department."

Time will not permit us to detail or enumerate our full reaction to this proposal, but we shall make only a brief statement that we are cognizant is not an accepted axiom nor any more accredited than the essayist's opinion, as quoted; neverthless, permit us to state that wherever in this paper, in any other manuscript, book, or spoken word you find reference to treatment being administered by or in association with an official local health department, or treatment supervised by a full-time or part-time health officer, in our judgment, born of a conviction, you meet a most ill-conditioned suggestion and wherever followed a questionable practice, estranging the helpful support and cooperation of the medical profession, and reducing the incidence of syphilis in no appreciable degree.

Second, in **"General Control Measures,"** under **Education** the essayist states, "A traveling lecturer will do much to standardize methods of diagnosis and treatment. In college, and perhaps high school curricular studies, the question should find a place in sociology, biology, and allied subjects." Samuel Johnson said, "Much can be made with a Scotchman if he be caught young," perhaps meaning to say as has often been said, "Education makes a people easy to lead and easy to govern, yet difficult to enslave." Reasoning by analogy, sex education and venereal disease education will make the individual easy to lead and easy to govern and difficult to enslave by the grasping tentacles of this loathsome malady. We appreciate profoundly the influence of full education, yet again, time and preparation do not allow us to analyze and present our personal reactions; however, permit us to quote from a most eminent authority who said, "Nowhere is wisdom more urgently needed than in devising the form which publicity to venereal disease is to take, for the matter is not without its risks, the risk, especially, that in the young the flames may be fanned rather than quenched."

Third, the essayist in the **"Background for Control"** in this paper states, "Very few diseases have the potentialities for public health control measures that syphilis has. Syphilis has much in common with tuberculosis. The solution to both problems is a matter of isolation and treatment." Much in common? Yes. But so much more that is unlike, different, dissimilar, distinctive and heterogenous not only to tuberculosis, but to all other communicable diseases, which fact makes the problem of the control of syphilis a problem unlike all other problems.

Practically all infection from other communicable disease is spread by respectful, nonreprehensible civil contact; the chain of communication can be traced without private or public shame, methods of control and eradication meet with public approval and aid, rather than with society's relentless opposition; but infection with syphilis is most always contracted through sexual relations, legitimate or illicit, but this relation, this sexual intercourse is either of a nature too sacred to permit of publicity in methods of control of infection therefrom, or so reprehensible and vulgar that it fails to challenge society's sane and effectual support of efforts for control of any resultant infection. Furthermore, its transmission is consummated in an act, a sexual relation, wherein there is not only the compelling force of sensual gratification, but a fulfilling of a fundamental instinct that holds in abeyance those physiologic functions that are essential in the propagation of human life. Surely any communicable disease encompassed by such elemental and fundamental factors in its transmission must be a problem peculiar to itself.

We regret that time forbids us supplementing this most valuable paper with a few personal reactions, if not convictions, pertaining to possibly other valuable methods of control of this atrocious and perhaps universal malady.

DR. S. S. CARUTHERS (Duck Hill): This problem of venereal disease control by the agencies suggested by the essayist, and that of the lessening of the incidence and ravishes of the disease is another. I do not know how well these theories might work in the cities, but in the rural centers, where the majority of us face this problem, we had a little practical experience several years ago when Dr. H— conceived the idea of the eradication of venereal disease in Mississippi, and in a well meant effort extensive work was done by the government to carry this out. A phychological element enters into it, especially among the more ignorant classes of people. In the community in which I live the idea was spread about quickly that the government would take care of those affected with this disease and treat them free of charge. Since that time these people have practically ceased going to a physician for treatment and if they do go they want the treatment free of charge, and do not believe the physician when he tells them that the government does not provide for their treatment any longer.

Their idea was that it was a disease they could get rid of easily and without expense to themselves, and as a result there has been a considerable increase in the incidence of the disease, and conditions were made far worse in the rural communities by these well intended efforts, and I believe that this idea among the more ignorant element of the people will go far to negatize any effort at control.

DR. R. M. ADAMS (Ripley): I have always felt that the control of veneral disease was a major problem confronting this civilization; that it was one of our greatest economic problems; and that it should challenge the very best efforts of our various health organizations. It has been a source of regret to me that we have not given it its proper place in our program of health activities, and that in spite of the forging ahead by scientists providing a means of recognizing the disease with almost certain accuracy, and providing treatment for same, that it has continued to be a great menace to our civilization, and that more wreckage and grewsome results accrue from venereal disease than from any other scourge that has ever afflicted the human race.

The civilizations of past centuries were perhaps excusable for not waging war on and controlling this disease, that it was allowed to rage and destroy and tear down the best of their civilization, because they had no means of diagnosing accurately the disease in its early stages, and had no means of controlling and curing it when diagnosed. Are we excusable today in the light of this great scientific age and forging ahead as the scientists have in the diagnosis, prevention and cure of this dread disease, that we go along and tolerate it as a matter of fact? If any other disease — malaria, smallpox, diphtheria or typhoid fever—caused as much human wreckage as does syphilis, and there were as many new cases every year as there are of syphilis, we would not have to prod our public health organizations to an active campaign to control the disease. If we had 30,000 cases of smallpox in Mississippi as it has been estimated by a recent health congress in Washington, that there are that number of cases of syphilis, it would be made a major health problem, and means would be devised to control it. Why then should not every effort be put forth to control this, the greatest scourge that afflicts humanity? Tuberculosis is a great problem. I rejoice in the heroic efforts that have been made to control and cure tuberculosis. Syphilis is equally as great a problem. Tuberculosis is not disgraceful, it does not cause the gruesome human wreckage that does syphilis; it does not fill our public institutions with the results of the havoc it has wrought, but it seems that we pass all this by lightly and with our heads in the sand we refuse to see.

I do not know. I am out of the health game personally but I watch with interest the advances made by the various health boards in their fight against this great human scourge.

I would like to emphasize that an ounce of prevention is worth a pound of cure. It seems to me that herein lies the key to the situation. I do not wish to enter into a discussion as to treatment from a public health standpoint. I know that you are busy with taking care of the wreckage incident to this scourge rather than stopping the incidence, or dealing with the source from which it comes.

Once I was delivering a lecture. In the

audience I saw a small boy and I said, "Son, if you were in the basement and couldn't get out and the water was pouring in, what would you do?" The boy said, "I would cut the water off." Let's do that—let's cut off the faucet. How are we going to do it? I'll tell you—inform the child. The young people, and those vitally interested in public health work are the ones to do it. Inform people as to the terrible wreckage accruing from this disease and you will have no trouble in getting them to take treatment. They will not want free treatment, they will be glad to pay for it.

The best educator the world has ever known was a militarist. He once said, "What you would have Germany be fifty years from now, put into the schools today." He put militarism into the schools of Germany, and we know too well what the results were. What you would have Mississippi be 50 years from now, put into the schools today. Go before the women's clubs, the religious and civic organizations and tell them, then you will not need to have free treatment.

I believe that this is the most disgraceful scourge that has ever afflicted Mississippi. Syphilis should be driven out. We as a commonwealth should hang our heads in shame and say, "It shall not exist, and this shall be a state in which our children will have the right to have a clean life, a healthy body and a normal mind."

DR. J. GOULD GARDNER (Columbia): Dr. Harrison has presented a very fine paper, There are, however, a few things I would like to emphasize. The first is the ineffectiveness of neo-salvarsan for the cure of syphilis if used by itself, especially if only a few doses are given.

I am convinced that neo-salvarsan should be supplemented in every case with either mercury or bismuth intramuscularly, one grain of mercury salicylate in oil or water soluble, or three grains of oil suspended bismuth, deep in the gluteal muscles with each dose of neo-salvarsan.

We have adopted the Stokes method of administering these drugs in a series of eight treatments, five to seven days apart depending on the case, with a rest interval of one month, and with never less than three courses, which amounts to 24 treatments.

At the end of six months the blood and spinal fluid are both checked. If negative, the patient is instructed to report for another test in one year. If this is negative, he reports again in two years. If at this time he is all right, the patient is discharged.

If the spinal fluid is positive, no neo-salvarsan is given. I am convinced that it not only fails to cure these cases but actually accentuates the disease. These patients are treated with tryparsimide, three grams intravenously, with bismuth intramuscularly, once a week for ten weeks, followed by one month's rest. This is continued until from 30 to 50 treatments have been given. In the young paretic type of patient, pyrotherapy should be used.

DR. G. W. F. REMBERT (Jackson): While I shall not attempt to discuss this paper as to the advisability of attempting to control or manage syphilis from a public health standpoint or the best means of accomplishing the same yet there is a way in which its identification and spread might be much better taken care of than I fear is the case at the present time and which is by the taking of a Wassermann test for blood with every patient, where it is at all possible, regardless fo the age, condition or station in life of the individual. In this way, many cases of syphilis, even though without history or symptoms, would be found and proper treatment should be then either administered or advised. This, of itself, would go a long way toward cutting down both the incidence and ravages of the disease as well as exercising some degree of control.

I would add endorsement to Doctor Gardner's statement that no case of syphilis can be considered cured until negative spinal fluid examinations for this disease will have been obtained.

DR. V. B. HARRISON (closing): I think it would be a fine thing to discuss all phases of syphilis, but of course we can not do so at this time.

The problem of syphilis control boils down to two points: first, the economic phase, and second, the moral phase. It has been proven that not less than fifty weeks of continuous treatment are necessary for cure in early sero-negative syphilis and the cost of treatment in private practice is $300 and up. Three hundred dollars of the average man's income is a lot of money. I dare say if I were to circularize all the practicing physicians in this room on the question of treatment, I would find few who give their cases this amount of treatment. The problem can be met in some measure by reducing the cost of treatment, but how can it be done? The moral phase of syphilis is a challenge to a control program. Key, of New York has said that until we can impress upon the people that syphilis is a disease just like any other disease and not a punishment for a sin, we will not go far in its eradication. As long as we stigmatize the patient, he will try to conceal his affliction and will not take advantage of treatment.

Dr. Smith raised the question as to the wisdom of the health department taking any part in the control of the disease. I believe it should take an active part unless some one can offer a better plan. Among other reasons, I believe that the health officers have the experience and authority necessary for communicable disease control not enjoyed by the private practitioner. As to sex education—I do not advocate the usual procedures of "sex education" but rather a sound system of instruction in biology in our schools. Educators in Denmark believe that such a system has been profitable in their country.

Dr. Caruthers voiced an opinion, which has many advocates, that free or easily acquired treatment creates a false sense of security and promotes promiscuity in morals. I believe a study of the facts in the case will disprove such a statement.

Dr. Gardner pointed out the dangers of insufficient treatment. Most lesions clear up under little treatment and these cases pass out of our hands. Again, the question of high cost of treatment is a common cause of inadequate treatment. I don't agree with Dr. Gardner on the matter of intermittent treatment.

My principle motive in presenting this paper was to provoke discussion and if I have succeeded in doing that, I think we may expect a revival of interest and a practical program may be inaugurated.

Mississippi State Medical Association

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EDITORIALS

PROGRAM FOR THE 1937 MEETING

On Friday night, July 31, Dr. Harvey F. Garrison, president of the Mississippi State Medical Association, had the chairmen of the various sections for the 1937 meeting, together with the president-elect, Dr. W. L. Little, at his home for dinner and for an informal discussion of the program for the next meeting.

Plans were laid for a most interesting and instructive program along the lines of a "postgraduate course" of instruction. Several outstanding men in their respective fields of service, who are capable of giving such instruction, are to be invited to address each of the sections, and the program will be so arranged that these lectures will not conflict and everyone can hear each of these outstanding lectures.

It was further agreed that these lecturers will be requested to make their addresses practical, adapted to the needs of the general practitioners and not ultra-scientific and technical. The chairmen were also instructed to advise these essayists that the time limit will be enforced strictly so that the program may go according to schedule.

President Garrison urged the chairmen to get out their programs as soon as possible so that our doctors may know what is in store for them and begin to arrange their plans for attendance.

The next meeting will be at Meridian in May, 1937. The chairmen are: Dr. Willis Walley, Jackson, Surgery; Dr. Joe Green, Laurel, Medicine; Dr. Robin Harris, Jackson, Eye, Ear, Nose and Throat; and Dr. Felix J. Underwood, Hygiene and Public Health.

D. W. JONES

Jackson, August 6, 1936.

HEAT SICKNESS

During a period of excessively hot weather, such as has been prevalent in wide areas of this country for the past few weeks, most any doctor, regardless of his specialty, is liable to be called upon to render emergency service to someone desperately ill from some type of heat sickness. This is not a trivial ailment. Fatalities are not uncommon. Whether or not a patient recovers or dies may depend entirely on the ability of the first physician obtained to make the correct diagnosis and render proper treatment.

The usual forms of heat sickness are: 1. **Heat cramps.** 2. **Heat prostration.** 3. **Heat stroke** (sun stroke).

Patients with **heat cramps** have intermittent pains, often very severe, in the extremities or abdomen or both. Fibrillary twitching may be observed as a dancing motion of the skin overlying the involved muscles. Enlarged hard muscles may be seen and felt. The muscular spasm may be so generalized as to simulate epilepsy. The temperature may be normal, subnormal, or slightly elevated. The skin is usually pale and there may be perspiration. The pulse is rapid. There may be air hunger and hyperpnoea. The mind is usually clear, but in severe cases, delirium may occur. In some cases, muscular cramping appears to be the initial stage of heat prostration.

Heat prostration presents a picture similar to the above, except for the possible absence of muscular cramps and the predominance of collapse.

Heat stroke (sun stroke) is heat sickness with what appears to be complete breakdown of the body heat regulating mechanism. Perspiration usually stops and the skin is usually hot and dry. At the onset, dizziness, mental apathy, and painful urination are common. As the temperature rises, frequently from 107 to 110°F. coma may be expected. The mortality rate in this type of heat sickness has been about thirty per cent. If such patients recover, they are prone to have evidence of residual damage in the form of abnormal nervous irritability and decreased tolerance for heat. Postmortem examination of fatal cases has shown multiple hemorrhagic foci in the brain tissue.

Apparently, the various forms of heat sickness are produced by the same cause. Prolonged excessive sweating deprives the body of large quantities of water and of salt. Replacing the water by copious drinking not only does not replace the salt, but further dilutes the blood plasma and encourages more salt loss by more excessive sweating.

The study of this condition among men working under high temperature conditions at Boulder Dam has given us valuable information. These men were given drinking water containing 0.15 per cent sodium chloride as a prophylactic measure. If slight cramps developed, they were put at rest in a cool place. If there was collapse, they were given normal salt solution intravenously or subcutaneously. If conscious and not nauseated, the patient may drink salt water. It may also be given as an enema. Morphine may be necessary for the control of pain. Chlorol hydrate, by mouth or by rectum, or even chloroform may be necessary for convulsions. Caffeine sodium benzoate, strophanthin, or other stimulants may be used as indicated for circulatory depression. The possibility of co-existing disease must be considered, and if detected, appropriately treated. Results from these preventive and therapeutic measures have been gratifying.

For the treatment of heat stroke with hyperpyrexia, in addition to the above measures, it is necessary to use some cooling process to reduce the body temperature. Fantus recommends spraying the body with cool water, using a spray can or a hose, and at the same time aiding surface evaporation by fanning. Use an electric fan for the purpose if available.

A. S.

COOPERATION

In July, in an effort to furnish to the members of the Mississippi State Medical Association an official publication of which they could be proud and which might rank with the publications of other state medical associations, the following letter was sent to all members of the Association:

To the Members of the Mississippi State Medical Association:

In "The Mississippi Doctor" each month is a section devoted to our Mississippi State Medical Association.

This is **your** official publication. In it are printed the papers read before the Association at its annual meeting, selected papers read before component societies, editorials, news of the State Association and medical societies, news of the profession and their families in the 82 counties of the state, and news and transactions of hospital staffs. In addition, the columns of your journal are open for discussions of laws and matters affecting the profession and for passing on new (or old) procedures and remedies which have been found useful. In fact, we would like to print everything that may be of interest to the members of the Association.

Your editor or your publication committee alone cannot make the journal representative of the whole Association. The continued interest and help of a number of county editors has kept us regularly informed of activities in certain parts of the state and to these members your editors are sincerely grateful. To be of most interest and worthy of a place among the other state medical journals of the country it should reflect the thought of **all** members.

This is to ask and urge **your** assistance. Will you not write to me frankly your ideas of what a medical journal should publish? Do you like the present set-up? If not, how should it be changed?

Will you write an editorial?

Would you be willing to send in your impressions of the meetings of your county medical society?

Would you send in news of the activities, accomplishments, loves, weddings, births, deaths. and hopes of the doctors and their families in your county or community?

Would you be willing to report interesting cases presented at staff meetings of your hospital for the benefit of those not privileged to be present?

Would you furnish items of historical interest in the practice of medicine in the state or in your county or community?

Please do not throw this letter in the waste basket. Please do not lay it aside. Please answer now. An envelope which requires no postage is enclosed.

PLEASE write me **now**. THANKS.

With every good wish,

Sincerely yours,
LEON S. LIPPINCOTT,
Editor.

P. S. This letter is mimeographed to save expense. Please consider it **personal** to **you**.

* * *

Eight hundred and ninety-three letters were sent. To August 8, **FIFTEEN replies** had been received. Most of those replies were constructive and your editors are grateful.

LETTERS RECEIVED

It seems to me that you are doing well with the Journal. We have a county society reporter to advise the Journal of interesting happenings in S. E. Mississippi. Best wishes for success and prosperity.

I shall be pleased to help out in any way on activities in Yalobusha County for Mississippi State Medical Association (section in "Mississippi Doctor").

Answering your letter to the membership of the State Medical Association, in which you ask unified support of the official publication, "The Mississippi Doctor." I wish to say that I will be glad to assist in every way I can, and when I can serve please command me.

I think the present set-up of the publication is rather unique for a medical publication, but it is somewhat attractive and distinctive and sets it apart from the ordinary medical journal. Personally I like it in its present form because it represents the Mississippi doctor. We are in the pioneering stage, but possessed with enough rugged individualism and a spirit of cooperation to make progress.

I think perhaps we have a little too much medical politics, but even so, we are making medical history, which, I hope, will overshadow misdemeanors, if any.

Please command me when I can be of service.

I am sorry to have delayed answering your letter of recent date.

None other than favorable criticism can be made by me of material which has appeared in "The Mississippi Doctor." The present setup suits me.

If necessary, I would attempt to write an editorial.

Personal contacts, letters and telephone calls over a period of three years have failed to effect meetings of our county society. The matter with its seeming impossibilities has been referred to our local auxiliary workers who are quite efficient but who seem to get no credit for what they do.

I would send in county news if I were local reporter.

Items of historical interest would be furnished if available.

Thanking you for the letter and assuring you of our appreciation of your continued successful efforts.

I infer from your letter addressed to all members of the Mississippi State Medical Association you would like to have a little more cooperation in gleaning news of interest to our

Medical Association for our medical journal. I will be glad to undertake this for Oktibbeha County.

I will do it in the future.

Change programs once in a while. Give all of the boys a chance to have some part in the meetings in place of a very few doing all things all of the time,—allowing a certain set to control all meetings—all activities. Get opinions of fellows from the rural districts, etc.

I do appreciate this personal mimeographed letter you have gotten up. If we, the members of the Mississippi State Medical Association, would show half of that kind of spirit our "Mississippi Doctor" would command the interest of the country as a state medical journal.

I am very proud of the journal as a whole and I pledge myself to do all I can to keep it growing.

Assuring you of my interest at all times.

I appreciate "The Mississippi Doctor" and enjoy it. It seems that it is getting over O.K. and I have no suggestions to offer as to its articles or editorials.

I will be glad to assist in any way possible to make it a bigger and better journal. If I can be of any service in reports, etc., will consider it a pleasure to do so. Please feel free to call on me for anything I might do.

"Your recent circular letter touching on a more efficient State Journal was received and I shall make a brief reply to it. It seems to me that "The Mississippi Doctor" has made rapid strides in improvement since it became the official organ of the State Medical Association.

"Of course such an organ should emphasize, as of first importance, the scientific side of medicine and its practical application, but, in my humble opinion, the lesser affairs of life, which we encounter at every turn, should occupy a conspicuous place on its pages.

"If I mistake not the late lamented Dr. E. F. Howard originated the plan of having every county medical society elect an editor, whose duty it was to send to the editors of the State Medical Association a monthly report of the happenings, both small and great, in his particular county. If these editors took their duties seriously, our state journal would show a spirit of cooperation among all the doctors of organized medicine in the state.

"While it is left to the very few to corner the germ of acute anterior poliomyelitis and measles, yet we can always do the little things of life."

August 7, 1936.

Your letter relative to the "Mississippi Doctor" came several days since. I really intended answering earlier, but have been sick with a very severe cold, consequently have done nothing that I could evade. Have no suggestions to make, and don't see where I could help out in any way. Am not fitted mentally to write for publication and am away off in a corner of the country where I rarely come in contact with any of my fellow practitioners so am not conversant with their comings and goings. The fault I find with the majority of the medical journals is too much technique and not enough practice. A country M.D. who has to furnish his own drugs and has no access to a laboratory doesn't get much out of these long winded articles. With best regards.

This will acknowledge your recent letter requesting my ideas concerning "The Mississippi Doctor."

It is my desire to reply very frankly to certain of your specific questions. I hope my remarks will not be considered in any sense offensive.

I personally think this particular Journal should publish papers that are of scientific interest and particularly papers written by members of the profession in this state. It occurs to me that it would be well for an editorial board to read all manuscripts submitted and decide if they are worthy of publication. I think a great deal that appears in print is so poorly written or is of so little worth it would be best left unprinted.

I do not like the present set-up of this particular Journal. It seems to me that to distribute advertisements throughout the pages of a journal cheapens it, and I personally see no reason to maintain this arrangement. I imagine that the advertisements, in large part, support all journals, but surely they could be segregated, either on the first few pages, the last few pages or both, of the journal and the remainder of the Journal devoted to the scientific publication.

Also until you made it your business to edit the galley proofs submitted, they were simply atrocious. I congratulate you on having in major part remedied this objection to the Journal.

I am delighted to see that you are maintaining your active association with the Journal and if it is to remain the official publication for the Mississippi State Medical Associaton, I trust that you will maintain the position you now hold.

"Thank you for your letter about the "Mississippi Doctor." I shall be glad to cooperate in any way, whether it be in submission of editorials or case reports or what not.

"I like present journal very well. The only objection that I have to it at present is the smallness of the print which makes it rather uninviting from a psychological standpoint to the reader."

"We should go back into a joint publication of our State Medical Journal, with the Louisiana State Medical Association."

"Please feel free to call on me for any help that I may be able to give along the lines suggested in this letter. At the present time I am preparing a program for the October meeting of the Delta Medical Meeting and will be pleased to send you a copy as soon as it is completed.

"With all good wishes."

"I will cooperate with you and render service in what ever way I am qualified.

"Sure, I am interested in the success of "The Mississippi Doctor" and look forward to its becoming one of our leading medical journals if not already so.

"Cooperation of the doctors of Mississippi will make it whatever you want it.

"I believe the success of "The Mississippi Doctor" is assured."

"In reply to your letter as to sending in papers for publication, I suggest that you establish a section in the Journal for miscellaneous news.

"I shall be glad to contribute anything I have for this section."

THE MEDICAL CARE OF INDIGENTS

Regarding the care of indigents, two problems exist: (1) Hospitalization, if and when necessary, and (2) professional care. There already exist throughout the land, state, county and municipal hospitals and dispensaries which are designed to provide medical facilities for the indigent sick. These hospitals, with exceptions in certain communities, are still ample to house the indigent sick of their communities. These institutions should be maintained by the communities whose indigent sick they are designed for, either by taxation or donation. The problem is a community—state, county or municipal—problem and not a federal one. The resources of most communities, even in these trying times, are sufficient to support these institutions and the necessary nursing service.

The medical profession has always given service ungrudgingly to the indigent sick, even though its members also pay taxes and make monetary donations. The value of such free service is enormous. Rather than have some form of sickness insurance like those being proposed by politicians, the medical profession would much prefer to continue to donate its services to the indigent sick. However, inasmuch as this is quite a burden on the profession, and physicians must have an income for livelihood, it would seem only just that each community should provide funds for medical services for its indigent sick on a scale-down basis, at perhaps one-half of the fee schedule for small wage earners.—Medical Economics—The Coordination of Resources for Medical Care in the District of Columbia, The Medical Society of the District of Columbia, 1935.

CHEMICAL TESTS FOR PREGNANCY

For centuries an accurate chemical test for pregnancy has been sought. Probably sometime it will be found. Many such tests have been proposed but thus far so far as is known, none is sufficiently dependable for general use.

A test proposed by Vischer and Bowman has recently drawn some attention. It is simple, can be performed in 30 minutes anywhere, and the reactions are fairly easily read. To one c.c. of urine are added one drop of 5 per cent hydrogen peroxide, 5 drops of 1 per cent aqueous phenylhydrazine hydrochloride solution, 5 drops of aqueous methyl cyanide solution, and 5 drops of concentrated hydrochloric acid. The tube is placed in a boiling water bath for 25 minutes and the reading taken. A russet color and flocculent precipitate indicate pregnancy and a straw color and no precipitate or only a powdery precipitate indicate no pregnancy.

In a series of 100 tests on urines taken consecutively recently made, there were 20 incorrect positives, 10 on females and 10 on males. Of 13 specimens from known pregnant women, 5 were correctly positive, 2 were doubtful, and 6 were negative. The total errors, exclusive of doubtful reactions, in the 100 tests were 26. This gives an accuracy of 74 per cent, hardly enough to make the test of value.

It must be stated, however, that the urine specimens tested were taken at various times of the day and without any attention to possible interfering medication. It might be that if the specimens were taken with the precautions necessarily observed for the Ascheim-Zondek, Friedman, and other animal tests, the results might be more reliable.

Until further experimental work is carried out, it is probable that it is safest to depend on the rodent and animal tests which have been proved accurate in better than 90 per cent of cases.

COUNTERVAILING DUTIES

In view of advice received from the German Government that they will cease what was considered to be unfair trade practices in the exportation of surgical instruments, cameras, and calf and kid leather to the United States, the Department of the Treasury has removed the countervailing duties on the importation of these products from Germany. This is effective on purchases or other agreements for exportation entered into after July 25, 1936.—Legislative Bulletin No. 52, American Hospital Association.

DIRECTORY AND CALENDAR OF MEDICAL SOCIETIES

Information is not complete. Secretaries of societies are urged to send in full data so that it may be known when the societies of the state meet; also the names of the officers directing their activities this year should be known.

MISSISSIPPI STATE MEDICAL ASSOCIATION: Seventieth Annual Session and Thirty-fourth Annual Session of the House of Delegates. Meridian, May 11, 12, and 13, 1937.

Adams County Medical Society: W. K. Stowers, Natchez, president; F. S. Dixon, Natchez, secretary. Meets third Tuesday each month, Natchez, 7:30 p. m.

Amite County Medical Society: D. H. Thornhill, Crosby, secretary.

Central Medical Society: E. L. Walker, Magee, president; L. W. Long, Jackson, secretary. Meets third Tuesday each month, Robert E. Lee Hotel Roof, Jackson, 7:00 p. m. Except July and August.

Claiborne County Medical Society: E. P. Jones, Hermanville, president; G. W. Acker, Port Gibson, secretary.

Clarksdale and Six Counties Medical Society: D. O. Pierce, Jonestown, president; N. C. Knight, Clarksdale, secretary. Meets fourth Wednesday of March and second Wednesday of November, Elks Club, Clarksdale, 2 p. m.

Clarke-Wayne Counties Medical Society: W. P. Gray, Waynesboro, president; Albert Hand, Shubuta, secretary.

Coahoma County Medical Society: J. A. Slack, Friars Point, president; N. C. Knight, Clarksdale, secretary. Meets second Wednesday each month, Clarksdale Hospital, Clarksdale, 1:30 p. m.

Delta Medical Society: J. W. Lucas, Moorhead, president; F. M. Acree, Greenville, secretary. Meets second Wednesday of April and October. Rotates through five counties, 2 p. m.

DeSoto County Medical Society: J. M. Wright, Hernando, president; L. L. Minor, Rt. 4., Memphis, secretary. Meets first Monday of January, April, July, October, Hernando, 10 a. m.

East Mississippi Medical Society: C. H. Gully, DeKalb, president; T. L. Bennett, Meridian, secretary.

Franklin County Medical Society: L. Costley, Meadville, secretary.

Hancock County Medical Society: A. P. Smith, Bay St. Louis, secretary.

Homochitto Valley Medical Society: Lucien S. Gaudet, Natchez, president; W. K. Stowers, Natchez, secretary. Meets January, April, July and October, 2:00 p. m.

Issaquena-Sharkey-Warren Counties Medical Society: T. P. Sparks, Jr., Vicksburg, president; Leon S. Lippincott, Vicksburg, secretary. Meets second Tuesday each month, Mississippi State Charity Hospital, Vicksburg.

Jackson County Medical Society: W. J. Weatherford, Pascagoula, president; R. G. Lander, Pascagoula, secretary. Meets second Thursday of March, June, September and December, Jackson County Hospital, Pascagoula, 7 p. m.

Jefferson County Medical Society: W. T. Harper, Fayette, secretary.

Newton County Medical Society: W. T. Pennington, Decatur, president; Dudley Stennis, Newton, Secretary.

North Mississippi Medical Society: R. G. Grant, Holly Springs, president; A. H. Little, Oxford, Secretary.

Northeast Mississippi Thirteen Counties Medical Society: Z. A. Dorsey, Troy, president; A. J. Stacy, Tupelo, secretary. Meets third Tuesday, March, June, September and December. Next meeting at Amory.

Pike County Medical Society: J. L. Bauer, McComb, president; Elise Rutledge, McComb, secretary. Meets first Thursday each month, McComb, 6:30 p. m.

Pontotoc County Medical Society: L. O. Carruth, Tupelo, R.F.D., president; O. F. Carr, Pontotoc, secretary. Meets first Tuesday each month, Pontotoc.

South Mississippi Medical Society: J. P. Culpepper, Hattiesburg, president; Carlton Temple, Hattiesburg, secretary. Next meeting, Sept. 10, 2 p. m., Laurel.

Stone County Medical Society: Earl W. Green, Wiggins, secretary. Meets with Harrison-Stone-Hancock Counties Medical Society.

Tate County Medical Society: W. D. Smith, Senatobia, president; J. Sidney Eason, Coldwater, secretary. Meets second Wednesday each month, Senatobia.

Tri-County Medical Society: B. L. Crawford, Tylertown, president; R. B. Zeller, Hazlehurst, secretary. Meets second Tuesday of March, Copiah-Lincoln Junior College, Wesson; June, Walthal Hotel, Tylertown; September, Riverside Hotel, Monticello; December, Whitworth College, Brookhaven, 12:30 p. m.

Wilkinson County Medical Society: E. M. Butler, Centreville, secretary.

Winona District Medical Society: P. B. Brumby, Lexington, secretary.

MISSISSIPPI HOSPITALS—CALENDAR OF STAFF MEETINGS

MISSISSIPPI STATE HOSPITAL ASSOCIATION:

Eighth Annual Session, Meridian, May 10, 1937.

Anderson Infirmary: Second Friday, each month, 6:00 p. m.

Biloxi Hospital: First Friday, each month, 7:30 p. m.

Clarksdale Hospital: Second Wednesday, each month, 1:30 p. m.

George C. Hixon Memorial Hospital: First Monday, each month.

Greenwood Leflore Hospital: Second Monday, each month, 8:00 p. m.

Houston Hospital: Last Thursday, each month.

Jackson County Hospital: Second Thursday, each month except July and August. 7:00 p. m.

Jackson Infirmary: Last Tuesday, each month, 6 p. m.

Meridian Sanitarium: Second Thursday, each month, 6:30 p. m.

Mississippi Baptist Hospital: Third Tuesday, each month, 6:30 p. m.

Natchez Sanatorium: Second Tuesday, each month 7:30 p. m.

Northeast Mississippi Hospital: First Monday, each month, 7:30 p. m.

Rush's Infirmary: Second Thursday, each month, 7:00 p. m.

South Mississippi Infirmary: Last Thursday, each month, 5:00 p. m.

U. S. Veterans Hospital, Gulfport: Every Monday, Tuesday, Wednesday, and Thursday, 10:45 a. m.

Vicksburg Hospital: Second Thursday, each month 7:00 p. m.

Vicksburg Infirmary: First Wednesday, each month, 7:00 p. m.

Vicksburg Sanitarium: Tenth or week of tenth each month, 6:30 p. m.

Winona Infirmary: First Thursday, each month, 7:30 p. m.

APPOINTMENTS BY THE PRESIDENT

Section on Eye, Ear, Nose and Throat: Robin Harris, Jackson, Chairman; C. C. Buchanan, Hattiesburg, vice-chairman; Hugh H. Johnston, Vicksburg, secretary.

Section on Medicine: Joseph E. Green, Laurel, chairman; B. Lampton Crawford, Tylertown, vice-chairman; Stanley Hill, Corinth, secretary.

Section on Hygiene and Public Health: Felix J. Underwood, Jackson, chairman; T. P. Haney, Jr., McComb, Vice-chairman; N. C. Knight, Clarksdale, secretary.

Section on Surgery: Willis Walley, Jackson, chairman; H. Lowry Rush, Meridian, vice-chairman; W. H. Anderson, Booneville, secretary.

Advisory Council of Woman's Auxiliary: Harvey F. Garrison, Jackson; W. L. Little, Wesson; T. M. Dye, Clarksdale; Leon S. Lippincott, Vicksburg; A. G. Wilde, Jackson.

Committee on Relations of "The Mississippi Doctor" and the Mississippi State Medical Association: J. Rice Williams, Houston; Joseph E. Green, Laurel; D. W. Jones, Jackson.

FROM OUR PRESIDENT-ELECT

I am due thanks to the Field Brothers at Centreville, hosts to the Homochitto Valley Medical Society on July 9, for my first visit to extreme southwest Mississippi. In spite of adverse weather conditions, there were about 75 doctors present.

I was gratified at the brothers' success in hospital work, for I found a hospital that would be a credit to any city in Mississippi. The purpose of this report is to call the attention of our Mississippi doctors to the success of the Field brothers, who could very deservedly be called the "Mayos of Mississippi." When they finished school and equipped themselves for service, they went back to their home town and established the Field Memorial Hospital, complete with all modern equipment and second to none in the state. In the light of this, I am advising all recent graduates to avoid the cities where the profession is overcrowded, where it is hard to get started, and to seek suitable locations in the interior where they are needed and make for themselves reputations for good and efficient work similar to that of the Field Brothers. We have many cities of 3,000 or less with a good country backing them where hospitals can be established to the advantage of both doctors and people. It is in these places that I am urging recent graduates to locate.

In the selection of talent for the evening's entertainment, credit must be given to the superintendent of nurses. She is especially fitted for her work as shown by the efficient manner in which the hospital is operated. The two speakers of the evening were Dr. Chaille Jamison and Dr. Mimms Gage, both of New Orleans. Their subjects were "Diseases of the Heart," and "Goitre" respectively. These lectures were well worth the visit of every doctor in the state for they were both interesting and instructive.

W. L. LITTLE

Wesson, July 27, 1936.

ANNOUNCEMENTS

Dr. R. B. Warriner, Jr., associated with Drs. McRae and Hurt. at the McRae Hospital, Inc., Corinth, August 1.

Dr. Vance Murry, associated with Drs. Gamble Brothers and Montgomery, Greenville, in charge of department of dermatology, July 15.

Dr. Ray L. Rhymes, associated with Dr. F. G. Riley's Hospital and Clinic, Meridian, general medicine and surgery, July 22.

PIKE COUNTY HEALTH DEPARTMENT

Acknowledgement is made of the receipt of a copy of the Fourth Annual Report of the Pike County Health Department to the Honorable Board of Supervisors of Pike County, the City Commissioners of McComb City, and the Commonwealth Fund, Dr. T. Paul Haney, Jr., director. The subjects treated include communicable diseases, maternal and child hygiene, school health program, dental hygiene program, venereal disease service, tuberculosis, sanitation and vital statistics.

Reported cases of typhoid fever, diphtheria, scarlet fever and small pox during the five year period ending with 1935 show very marked reduction when compared with the immediately preceding five year period. Significant, in 1935 all persons in one community of over 1500 people were essentially exposed to an epidemic of typhoid fever. Over 50 per cent of the people in this community had received during the past two or three years a complete series of inoculations of typhoid vaccine. It is probable that had the work of the Health Department not been done an epidemic of typhoid fever would have occurred.

Congratulations on good accomplished.

ADAMS COUNTY MEDICAL SOCIETY

The regular monthly meeting of the Adams County Medical Society was held at the Charity Hospital, Natchez, July 21, with twelve doctors in attendance.

At this time Dr. L. S. Gaudet, our delegate to the Mississippi State Medical Association meeting, gave a report from the meeting and the House of Delegates. Matters discussed were the resolutions from the Thirteen County Medical Society in reference to medical work for the government agencies; a motion offered by Dr. Joe Green relative to referring cases to charity hospitals.

There were no papers scheduled for this meeting; clinical cases were dispensed with.

A Dutch lunch was served following the meeting.

F. S. DIXON, Secretary.

Natchez, Aug. 4, 1936.

COAHOMA COUNTY MEDICAL SOCIETY AND CLARKSDALE HOSPITAL STAFF

The Coahoma County Medical Society and the Clarksdale Hospital Staff were called to order in the Nurses' Home of the Clarksdale Hospital, July 8, at 8 p. m. Dr. T. G. Hughes, vice-president, presided in the absence of Dr. J. A. Slack, president.

The minutes were read by the secretary and were adopted.

The secretary made a report which showed the society $3.50 in the hole. Dr. Brandon made a motion, which was duly seconded and unanimously carried, that each member of the society be assessed fifty cents to care for the deficit and provide funds to continue the expenses of the society. A few paid.

Under the heading of new business, there was a round table discussion entered into by all members present as to what should be done about continuing the society and improving attendance at meetings. The concensus of opinion seemed to be that the society should adjourn for the summer. Dr. Brandon then made a motion, which was duly seconded and carried, that the society adjourn to meet again the second Wednesday in September.

Mr. E. W. Still, member of the board of trustees of the Clarksdale Hospital, made a talk on the "History of the Clarksdale Hospital." Dr. Brandon discussed ways and means of improving the hospital.

The society then adjourned for refreshments served by Miss Louise Francis, superintendent of the Clarksdale Hospital, and enjoyed by all.

Dr. R. A. Strong and son, of New Orleans, and Mr. E. W. Still, of Clarksdale, were guests of the society.

Dr. R. A. Strong, head of the Department of Pediatrics of Tulane University, School of Medicine, gave a course of lectures on pediatrics in the City Hall, Clarksdale, the week beginning July 6. There was a total enrollment of 38 and an average daily attendance of 26, which we consider mighty good.

We consider ourselves very fortunate to have been able to have Dr. Strong with us. He gave us a splendid course in pediatrics. He is well informed on the most modern methods of pediatrics practice and he knows the needs of the general practitioner, having been one for many years himself. In addition, Dr. Strong apparently is gifted with all the necessary qualifications of the "teacher" because he certainly knows how to present his material in a form that will be grasped by the average practitioner very easily. Our time with Dr. Strong was well spent and we sincerely hope that none of you will miss any opportunity to hear his lectures.

N. C. KNIGHT, Secretary.

Clarksdale, July 26, 1936.

HOMOCHITTO VALLEY MEDICAL SOCIETY

The quarterly meeting of the Homochitto

Valley Medical Society was held in Centerville, at the Field Memorial Hospital, Thursday evening, July 9.

The hospital served a splendid dinner in the spacious dining room and Drs. Samuel and Jennings Field in their usual gracious manner planned a much enjoyed entertainment by Mrs. Field and Mrs. Price. This was a delightful treat to those present and they were encored again and again.

Dr. A. H. Little, of Wesson, president-elect of the Mississippi State Medical Association, honored us with his presence and gave a splendid address on closer co-operation of the medical profession in Mississippi.

There were visitors present from different parts of the state, as well as from Louisiana. The guests were graciously welcomed to meet with us.

Two masterful papers were presented at the close of the business session of the meeting. Dr. Chaille Jamison, clinical professor of medicine of Tulane University, addressed those present on "Auricular Fibrillation" and he is an impressive speaker.

Dr. I. M. Gage, assistant professor of surgery of Tulane University, spoke on "Thyroid Disease," which was well illustrated by lantern slides.

This was one of the best meetings with unusually good papers, and a splendid attendance.

It is of more than passing interest to know that Dr. Chaille Jamison is a grandson of the famed Dr. Stanford Emerson Chaille who was born in Natchez.

L. S. GAUDET, President

Natchez, Aug. 4, 1936

ISSAQUENA-SHARKEY-WARREN COUNTIES MEDICAL SOCIETY

A regular monthly meeting of the Issaquena-Sharkey-Warren Counties Medical Society was held at the Mississippi State Charity Hospital, Vicksburg, Aug. 11, and after a supper served at 7 p. m., was called to order by Dr. Walter E. Johnston, program chairman, with 15 members present.

Papers and Discussions:

Painful Breast.—Dr. M. Q. Ewing, Amory, exchange essayist from the Northeast Mississippi Thirteen Counties Medical Society. Discussed by Drs. N. B. Lewis, G. M. Street, L. S. Lippincott. Dr. Ewing closed.

Experiences in Obstetrics in General Practice.—Dr. W. A. Smith, Panther Burn. Discussed by Drs. W. E. Johnston and M. Q. Ewing. Dr. Smith closed.

Special Case Report from the Mississippi State Charity Hospital, Vicksburg.—Perforation of Duodenal Ulcer Without Ulcer History. —B. C. Brownson. Discussed by Drs. N. B. Lewis, A. Street, and W. E. Johnston.

Mr. Q. E. Gatlin appeared before the Society to arrange for a postgraduate course in obstetrics to be conducted in Vicksburg by Dr. Maxwell E. Lapham, Oct. 12 to 23, under the direction of the Committee on Postgraduate Medical Education. A committee on arrangements was appointed as follows: Drs. R. A. Street, Jr., chairman, W. H. Parsons and N. B. Lewis. It was decided to conduct the course at the Mississippi State Charity Hospital, Vicksburg, and the hour of meeting was set at 7:30 p. m.

Dr. Edley H. Jones was elected councilor for the Woman's Auxiliary to this Society.

Dr. N. B. Lewis made a report of the operation of the out-patient clinic conducted by the Society at the charity hospital which showed that there were 809 visits in the month of July or a daily clinic day average of 41.

Dr. Felix J. Underwood, executive officer of the Mississippi State Board of Health, announced that $1,000 had been allotted by the State Board of Health to the clinic for the control of venereal disease, and received the expressed thanks of the Society.

The next meeting of the society will be held at the Mississippi Charity Hospital, Vicksburg, Tuesday, Sept. 8, 7 p. m. the program will be devoted to surgery and as announced by the chairman, Dr. A. Street, will include the following.

Infections of the Hand.—Dr. J. Gould Gardner, Columbia, exchange essayist from the South Mississippi Medical Society.

Incidence of Carcinoma of the Cervical Stump Following Subtotal Hysterectomy.—Dr. J. A. K. Birchett, Jr., Vicksburg.

Total Thyroidectomy in the Treatment of Cardiac Diseases.—Dr. W. H. Parsons, Vicksburg.

Future programs include:

Oct. 13—Radiology. Committee: Drs. P. S. Herring, W. C. Pool, D. A. Pettit:

Carcinoma of the Cervix and Radium Irradiation.—Dr. M. L. Flynt, Meridian, exchange essayist from the East Mississippi Medical Society.

Roentgen Therapy in Breast and Pelvic Malignancies.—Dr. Karl O. Stingily, Meridian.

Diagnosis of Urologic Conditions.—A Motion Picture (Courtesy of the Winthrop Chemical Company).—Presented by Dr. Walter E. Johnston, Vicksburg.

Nov. 10—Public Health. Committee: Drs. F. M. Smith, A. K. Barrier, W. H. Scudder, T. W. Huey:

Laboratory Aids in the Diagnosis of Communicable Disease.—Dr. N. C. Knight, Clarksdale, exchange essayist from the Clarksdale and Six Counties Medical Society.

Non-Tuberculous Chest Conditions Simulating Tuberculosis. Dr. William D. Hickerson, Sanatorium.

The Ethical Relations of the Family Physician and the County Health Officer in the Observance and Enforcement of State and Local Regulations Pertaining to Communicable Disease Control.—Dr. F. Michael Smith, Vicksburg.

SOUTH MISSISSIPPI MEDICAL SOCIETY

The South Mississippi Medical Society held its regular meeting at the Forrest Hotel, June 11, in Hattiesburg.

Dr. J. P. Culpepper, Jr., Hattiesburg, was conducted into the office of president of the society by Dr. J. Gould Gardner, Columbia, the retiring president.

The scientific program included the following:

Indications for Induction of Labor.—Dr. M. P. Lapham, Philadelphia, Penn.

Common Pediatric Problems.—Dr. G. Lamar Arrington, Meridian.

Breast Tumors.—Dr. A. C. Hewes, Gulfport.

Spina Bifida—A Report of Three Cases.—Drs. H. L. and L. V. Rush, Meridian.

A general and interesting discussion of the above papers then took place with most doctors present taking part in the discussion.

It was announced that Dr. Leon S. Lippincott, Vicksburg, has been secured as the exchange speaker from the Issaquena-Sharkey-Warren Counties Medical Society for the September meeting. Dr. J. Gould Gardner will be the exchange essayist at the meeting of the Issaquena-Sharkey-Warren Counties Medical Society also in September.

The secretary was instructed to express the appreciation of the Society for the excellent services rendered to its members by Dr. M. P. Lapham during the past ten weeks.

Dr. G. E. Godman, secretary-elect, having moved to Quitman, Dr. Van C. Temple, Hattiesburg was elected.

Following the meeting, dinner was served in the Forrest Hotel.

VAN C. TEMPLE, Secretary
Hattiesburg, July 17, 1936.

ADAMS COUNTY

Dr. Homer A. Whittington is spending some time in Chicago, at Cook County Hospital, doing special work in electrocardiology. During his absence Mrs. Whittington and daughter, Rene Gene, are spending the time in Brookhaven with relatives and friends.

Dr. and Mrs. W. K. Stowers are the proud parents of Master Stowers, the third. According to latest reports he is growing to be a husky fellow.

Mrs. R. D. Sessions, who has been seriously ill at the Natchez Sanatorium, is much improved and now at home where she is again seeing her many friends.

The Natchez Sanatorium now has a complete x-ray equipment with Dr. George Logan in charge. Mrs. Robert Dixon has also moved her laboratory from Dr. Beekman's office to the Natchez Sanatorium.

The genial senator, Dr. James C. Rice, has promised the Adams County Medical Society one good time upon Lake St. John soon. We will see. He and all of us like the famous dish he serves of chicken and spaghetti and how it makes your mouth water. He takes his friends over to fish and makes them fish out in the lake, and, of course, they do not catch any. He fishes in a wire netting enclosure well stocked with fish and my, how he can catch them. Besides he feeds his fish on bread soaked in beer. So the tale goes that they tell on him. Smile! Smile! Smile!

L. S. GAUDET, County Editor
Natchez, Aug. 4, 1936.

DESOTO COUNTY

The doctors of this county are in good health and spirits and active in their work.

The North Mississippi Medical Society held an interesting meeting in Como recently. We think it is a good idea for our local and state associations to meet at other than a stated place. Dr. R. G. Grant, Holly Springs, is president and Dr. A. H. Little, Oxford is secretary of this organization composed of physicians in seven counties in North Mississippi.

The program and attendance were good. We also think that each county should have a vice-president who can act as a liason officer and assist in building up attendance and interest in their respective counties.

We read with much interest the article of Dr. H. A. Gant, ex-president of the Mississippi State Board of Health, in the July issue of "The Mississippi Doctor;" we will follow his "Reminiscences" with pleasure.

Among those recently granted licenses by reciprocity was Dr. Henry Manley Wadsworth, Hernando. The good doctor immediately sent his application and check for membership in his local medical unit. We welcome the doctor. He has the office and equipment of the late esteemed Dr. A. J. Weissinger.

The editor's brother, H. D. Minor, Esq., Memphis will leave Friday for Lakehurst, N. J., where Sunday night he will sail on the zeppelin Hindenburg for Frankfurt, Germany. After a stay there, he will fly to England, coming home on the Queen Mary.

L. L. MINOR, County Editor
Rt. 4, Memphis, Aug. 5, 1936.

JEFFERSON COUNTY

The Death Angel struck four times in rapid succession in the family circles of the members of the Jefferson County Medical Society.

On November 24, Mr. M. C. Harper, father of Drs. R. B. and W. T. Harper, died at his home in Fayette after a lingering illness of nearly three years, aged 83. He was a graduate of the University of Mississippi (1873), for many years a member of the faculty of Jefferson Military Academy at Washington, later engaged in the mercantile business at Fayette, and for twelve years was superintendent of education of Jefferson County.

Dr. Edwin H. Linfield, who was killed in an auto-truck collision near Jonesville, La., Dec. 27, was a cousin of Drs. Harper. He graduated at Tulane in 1920, was the last medical student to be captain of Tulane's football team (1919); practiced at Gulfport for several years, and since 1931 had been on the staff of the U. S. Veterans Hospital at Alexandria, La. He had just left his wife, formerly Miss Olivia Barrett, of Lexington, and their two daughters, at Jackson en rounte to Lexington to spend a part of the holidays at home, and was returning to Alexandria when the accident which caused his death occurred.

Dr. W. H. Lewis, a member of the Jefferson County Medical Society, died at his home in Fayette, Jan. 6, of acute lobar pneumonia, aged 69. Dr. Lewis came to Fayette from Louisiana more than 30 years ago, and was active in the practice of his profession until a few days before his death. He was formerly president of the Homochitto Valley Medical Society, at that time a component of the State Medical Association; several years health officer of Jefferson County, which office he still held at the time of his death; and this writer's life-long friend and neighbor.

Mr. M. E. Clark, father of our president, Dr. B. R. Clark, Lorman, died at his home in Lorman Jan. 22, aged 84. "Dad" Clark, as he was affectionately called by his many friends, contracted lobar pneumonia about Jan. 16, and under the care of his son and others who called to see him definite improvement was noted for a few days; but shortly before his death the disease spread to the opposite lung. He will be sadly missed by all who knew, loved, and respected him.

Dr. and Mrs. Clark have returned from a six-weeks' vacation trip to California, Texas, and other western statse. They report having enjoyed the change of environment and scenery very much. We regret that Mrs. Clark became ill shortly after reaching home and it was necessary for her to spend several days in a sanitarium. She is now back home again and we hope fully recovered.

Dr. Buie has been acutely ill at his home in Fayette for several days. We wish for him a speedy and complete recovery.

Our friend and former fellow townsman, Dr. John M. Whitney, now parish health officer at Jennings, La., was married in New Orleans August 1 to Miss Georgiana Rita Burst of the Crescent City. To this couple we extend our best wishes for success and happiness.

W. T. HARPER, County Editor
Fayette, Aug. 9, 1936.

LEFLORE COUNTY

Drs. J. W. Lucas and U. S. Wasson, Moorhead, and C. R. Freeland, Glendora, were visitors to Greenwood, July 2.

Miss Josephine Barry of this city was married to Dr. Warren Brown, of New Haven, Conn., July 3, at Greenwood. Dr. John Rose acted as best man, Dr. Murphy Allen, Marlin, Texas, was one of the groomsmen.

On July 4, Dr. and Mrs. D. T. Sayle, Highlandale, this county, entertained with an old fashioned barbecue. There were 48 guests present.

Miss Catherine Drane, Natchez, is spending the summer with her uncle and aunt, Dr. and Mrs. Edgar Giles at Avalon.

Dr. J. M. Tyler and Dr. Ruby E. Tyler and three children of Tuscaloosa, Ala., are visiting in the home of Mr. and Mrs. H. L. Cooper. Dr Ruby Tyler is a sister of Mrs. Cooper.

Dr. and Mrs. W. E. Denman spent a ten days' vacation visiting in Arkansas.

Dr. L. H. Hightower, Itta Bena, carried his daughter to summer school at Peabody, Nashville, Tenn., July 18.

Dr. and Mrs. B. B. Harper left on the "Know Mississippi Better" train July 20, for their summer vacation.

Mrs. J. C. Adams and children have returned from a trip to New Orleans.

Dr. G. Y. Gillespie, Jr., spent ten days on the coast, as also did Dr. and Mrs. R. B. Yates and Miss Marjorie.

Mrs. L. B. Otken and children are summering in Charleston. W. Va.

Dr. George Baskervill visited in Greenville, July 26.

Dr. W. B. Dickins visited his old home in Batesville, July 26.

Dr. and Mrs. T. Y. Fleming, Minter City, visited in Jackson, July 30.

Dr. W. B. Dickins visited his son, Dr. R. D. Dickins, at Monticello, Ark., July 16.

Dr. Felix J. Underwood. Jackson, addressed the Veterans of Foreign Wars Convention in Greenwood, July 24.

W. B. DICKINS,
County Editor
Greenwood, Aug. 4, 1936.

SUNFLOWER COUNTY

Dr. J. D. Biles, Jr., Parchman, has received a scholarship for postgraduate study abroad. Dr. W. E. Wiggins of Indianola was appointed state penitentiary physician to succeed Dr. Biles and the vacancy made by Dr. Wiggins' resignation as county jail physician was filled by Dr. J. A. Alexander.

Dr. Ray Biggs, of Jackson, who has recently completed a course in public health at Vanderbilt University is spending several weeks in Indianola observing the activities of the Sunflower County Health Department.

Dr. H. C. Kent who has been in ill health for some time is vacationing on the Gulf Coast.

Mrs. G. J. Mancill has just returned from a two week's visit with relatives in Union.

Dr. and Mrs. H. B. Cottrell spent several days in Tyler, Texas, with relatives. Their little daughter, Flo, remained in Tyler to spend a month.

H. B. COTTRELL,
County Editor
Indianola, Aug. 6, 1936

WARREN COUNTY

And North Carolina, The "Old North State," was peculiarly honored last month by a passing visit from Dr. W. H. Parsons, Vicksburg. Jack "kinda hankered" on this last brief vacation to visit the land of our forefathers.

Dr. William K. Purks and his good wife have heard and heeded the call from the "Blue Grass" region, and for the last two weeks of July they have spent an enjoyable vacation with friends near Lexington, Ky. Bill expects to make cardiographic tracings of all the race horses in these parts and we are advised he will have plenty "Scientific Tips" at graduated prices for the oncoming Kentucky Derby. Take a chance boys, our Bill can't be wrong.

About the middle of July Dr. Stafford of Newellton, Louisiana, was in our city. The doctor states that perhaps in his locality thus far there has not been quite as much malaria as last year or as in 1934, and he has had no malarial hematuria thus far.

Dr. Hugh Johnston and wife were visiting in New Orleans in the early part of July. Dr. Johnston is one of our most progressive eye, ear, nose, and throat men and ardently advocates and practices "keeping up and ahead," still he can't quite understand why his wife enjoys visiting New Orleans and attending the feature pictures shown prior to their coming to Vicksburg.

On July 23, Dr. Thomas Sparks spoke to the Vicksburg Rotary Club as guest speaker. His subject was "Applied Psychology." The "Sparks" flew at every stroke as he welded the iron bands of heredity about us. Like Horace of old he made some of us think that "the brave are born from the brave and good. In steers and in horses is to be found the excellence of their sires; nor do savage eagles produce a peaceful dove," while others of us thought Samuel Butler was speaking again these words, "A degenerate nobleman, or one who is proud of his birth, is like a turnip. There is nothing good of him but that which is underground." Tommy made an excellent talk and proved conclusively, or to the satisfaction of all present, that every man was a son of his fathers, and furthermore at the conclusion of his talk he left everyone present happy, happy, that a long line of illustrious forefathers were born long before he was born.

Dr. B. B. Martin, Sr., took a short vacation the first week in August, accompanied by his "rainbow to the storms of life," the ever faithful wife. They visited the Mississippi coast and returned by the Crescent City, New Orleans.

The Vicksburg Infirmary held its monthly staff meeting August 5, 1936. Dr. G. W. Gaines, Tallulah, Louisiana, Dr. W. C. Pool, Cary, Dr. H. B. Wilson, Vicksburg, and Dr. Sapp, Vicksburg, were guests.

Bernard Shaw has been quoted as having

said, "It is a woman's business to get married as soon as possible, and a man's to keep unmarried as long as he can." So it would seem that our former townsman, Dr. J. W. Whitney, has given up the fight for we see in the daily press that since he left us a few months ago for a new field in Louisiana he has finally said, "I will, my dear, my better half."

An old Spanish proverb says, "He who would bring home the wealth of the Indies must carry the weath of the Indies with him." If this be true, and it must be, then Dr. George Street must now be a Croesus in wealth, for on his recent visit to Old Mexico, he took with him the inestimable wealth of a lovely and winsome wife and his two daughters, Polly and Lois, possessed of charm and bewitching personality.

Their stay in the fascinating land of Montezuma and the land of the long passed Incan civilization was the last two weeks of July.

Horace Greely said, "Go West young man," while Jekyll used to say "the further I go west, the more convinced I am that the **Wise** men came from the **East.**" All of these significant sayings must have been in the mind of Dr. Edley Jones, when in the first part of August he, with his good wife and Edley H., Jr., began their westward journey and on this brief vacation proposing to visit the Texas Centennial, Yellowstone Park, the Grand Canyon, etc., to "let observation with extended observation, observe extensively."

Dr. John H. Dent, Collins, has associated himself with the Vicksburg Infirmary. Dr. Dent graduated from Tulane University Medical Department in 1934. He afterwards interned at the New Orleans Charity Hospital for two years, with a special staff assignment during the last year on obstetrics and pediatrics.

H. T. IMS, County Editor

Vicksburg, Aug. 8, 1936.

WASHINGTON COUNTY

Dr. James Green who has been associated with Gamble Brothers and Montgomery, Greenville, has returned to his former home, Tupelo, where he will be associated with his father. His many Greenville friends regret that he will not longer be in Greenville, but wish him the best of luck and success.

Dr. Charles Berry, recently of Kansas City General Hospital, Kansas City, Mo., is now associated with Gamble Brothers and Montgomery, Greenville.

Dr. Vance Murry, recently of St. Louis, is now associated with Gamble Brothers and Montgomery, Greenville. Dr. and Mrs. Murry are being given a cordial welcome to Greenville.

Dr. F. M. Acree, Greenville, has returned from Dover, Tenn. He accompanied his mother home after a visit here.

Dr. and Mrs. O. H. Beck, Greenville, have returned from a visit to Memphis.

Mr. and Mrs. Ira Pegues and Ira, Jr., of Tuscaloosa, Ala., were week-end guests of Dr. and Mrs. J. C. Pegues, Greenville.

Mr. and Mrs. James Franklin and little daughter of Jackson were week-end guests of Dr. and Mrs. T. B. Lewis, Greenville.

Dr. and Mrs. Paul Gamble and children, Greenville, have returned from an extensive tour of the East.

The many friends of Mrs. S. M. Shankle, Hollandale, regret to learn of the recent death of Dr. Shankle. Dr. Shankle was one of the oldest physicians in the country and for the past twenty years was mayor of Hollandale. He will be greatly missed throughout this section of the Delta.

Miss Dorothy Sanders has returned to New Orleans, La., after a visit to her parents, Dr. and Mrs. J. S. Sanders, Leland.

Dr. K. L. Witte. Leland, general chairman of the horse show committee and Dean Hebron, assistant chairman, were in charge of the major details of staging the horse show held in Leland, July 4. This was one of the best and most successful horse shows ever held there.

The many friends of Mrs. John B. Baldwin and family of Greenville regret deeply to learn of the recent death of Dr. J. R. Baldwin. Dr. Baldwin has practiced medicine for thirty years, fifteen of which were spent in Greenville.

Dr. and Mrs. D. C. Montgomery and sons, Cameron, John, and Billie, Greenville, spent a few days on the Mississippi Coast this past month. Dr. Montgomery's many friends are delighted to know that he has recovered from his recent accident and is able to be back in his office again.

Mrs. John Lucas, Greenville, has returned from a most delightful trip to New York.

Dr. J. A. Beals, Greenville, attended a meeting of the Central Texas Medical Society at Temple, Texas, this past month.

Dr. and Mrs. J. C. Pegues' many Greenville friends regret to learn that they are moving to Greenwood, Sept. 1, to make their home. Dr. Pegues has been associated with the Gamble Brothers and Montgomery Clinic for several years.

JOHN G. ARCHER,
County Editor.

Greenville, Aug. 10, 1936.

DR. J. R. BALDWIN

Dr. J. R. Baldwin, for fifteen years a splendid resident of Greenville and practicing physician for more than thirty years, passed away at the King's Daughters Hospital where he had been taken for treatment of an illness with which he was stricken fourteen days ago. He was 55 years old.

Born in Madison County at Canton Sept. 17, 1881, the son of O. H. and Callie Ramsey Baldwin, he received his early education at Bowling Green, Ky. Later he received his medical degree from the Hospital of Medicine, Memphis, Tenn., in 1905.

He was married in 1906 to Miss Mary Wilson of Yazoo City. They took up their residence at Sharon, Madison County, where Dr. Baldwin practiced for two years. It was in 1908 that Dr. and Mrs. Baldwin moved to the Delta to make their home at Lamont. In 1921 they moved to Greenville.

Dr. Baldwin was a member of the health committee of the city council and served as county and city physician.

Dr. Baldwin was one of the city's splendid citizens. His contributions to charity were many and liberal. His death is a source of sorrow throughout the city today to his hundreds of friends.

He was a member of the Greenville Lodge of Masons and past patron of the Emmett N. Thomas Chapter, Order of the Eastern Star.

He leaves his wife and three sons, Frank

W. Baldwin of Indianola, John Baldwin, Jr. and Morris Baldwin of Greenville, two daughters, Mrs. J. C. Holland, Bowling Green, Ky., and Mary Emma Baldwin, Greenville. He is also survived by his mother, Mrs. Callie Baldwin, and a brother F. O. Baldwin, of Sharon.

Funeral services were held from St. James Episcopal Church conducted by the Rev. Phillip Davidson, rector, with Masonic burial services at the grave.

JOHN G. ARCHER,
County Editor
Greenville, Aug. 10, 1936.

YALOBUSHA COUNTY

Dr. George A. Brown reports July a very busy month at the Water Valley Hospital with the general run of surgical patients.

A recent staff meeting at the hospital was devoted to a discussion of infantile paralysis. All agreed on the importance of early diagnosis. Preventive medicine should have more time devoted to it in medical meetings.

There are no cases of infantile paralysis in our county at present.

The drug stores have been swamped with requests for sprays and atomizers.

The Water Valley Hospital is adding a new wing.

Dr. George A. Brown spent ten days on the Gulf Coast with his family. They report a good time and good fishing.

Dr. S. E. Cooper made a quick trip to New York to visit his daughter who was sick. She is reported better.

Water Valley is getting ready for the Sixth annual Watermelon Carnival, August 6. A large crowd is expected.

Miss Dorothy Sutton Brown, daughter of Dr. George A. Brown, was queen of the fifth carnival and will preside at the crowning of the new queen. We expect our governor to be present to crown the new queen.

The North Mississippi Medical Society met at Como, Panola County, with good attendance.

L. S. BROWN
Water Valley, July 31, 1936.

HOSPITAL STAFF TRANSACTIONS

MISSISSIPPI STATE CHARITY HOSPITAL, VICKSBURG

Dr. Edley H. Jones, superintendent, has announced the attending staff of the Mississippi State Charity Hospital at Vicksburg as follows-Drs. Nathan B. Lewis, president; W. P. Robert, vice-president; Leon S. Lippincott, secretary; Alston Callahan, L. J. Clark, Preston S. Herring, Guy C. Jarratt, Edley H. Jones, W. E. Johnston, B. B. Martin, Jr., T. P. Sparks, Jr., R. A. Street, Jr.

Dr. Nathan B. Lewis is the chief surgeon; Dr. L. R. Centanni is the house physician. During the summer, W. C. Alston, Checotah, Okla., C. E. Anderson, Charleston, and B. C. Brownson, New Orleans, La., junior medical students, are serving as undergraduate internes.

The staff meetings are held jointly with the regular monthly meetings of the Issaquena-Sharkey-Warren Counties Medical Society and any and all members of the Mississippi State Medical Association are cordially invited to attend.

EDLEY H. JONES, Superintendent
Vicksburg, Aug. 4, 1936.

VICKSBURG SANITARIUM

A regular monthly meeting of the staff of the Vicksburg Sanitarium was held Monday, Aug. 10, with 11 members and two guests present. After a supper served at 6:30 p. m., the meeting was called to order by Dr. L. J. Clark, acting president.

Dr. F. Michael Smith, director, Warren County Health Department, presented a report of vital statistics for the month.

Reports were received from the records department and the work of the hospital analyzed.

Special Case Reports:

1. Adeno-carcinoma of the Fundus of the Uterus with Apparently Secondary Vaginal Implanation.—Dr. A. Street.
2. Macromastia.—Dr. J. A. K. Birchett, Jr.
3. Hydronephrosis in An Eleven Year Old Child; Nephrectomy.—Dr. G. C. Jarratt.

Selected roentgen ray studies were demonstrated and discussed as follows: (1) Sarcoma of Knee; (2) Impacted Fracture into Hip Joint; (3) Bronchiectasis; (4) Pulmonary Tuberculosis; (5) Carcinoma of Stomach; (6) Kink of Ureter; (7) Calculus of Ureter (3 cases); (8) Calcified Tumor of Ovary.

Three-Minute Reports of the Literature of the Month:

Dr. G. M. Street: Technic of Colostomy.

Dr. A. Street: Surgical Treatment of Inoperable Carcinoma of Stomach; and Xanthomatosis of Bones of Skull.

Dr. R. A. Street, Jr.: Effect on Newborn Child of Administration of Barbiturates During Labor.

Dr. Leon S. Lippincott reported on experimental work with the Vischer and Bowman test for pregnancy.

The next meeting of the staff will be held Sept. 10, 6:30 p. m.

LEON S. LIPPINCOTT, Secretary

ABSTRACT: HYDRONEPHROSIS IN AN ELEVEN YEAR OLD CHILD; NEPHRECTOMY

G. C. JARRATT, M.D.

PATIENT.—White, male, age 11 years; seen in out-patient department May 13. 1936.

CHIEF COMPLAINT.—Pain in abdomen, fever, nausea and vomiting.

HISTORY OF PRESENT ILLNESS.—Mother stated child had awakened in morning three days ago with pain in epigastric region, went to school and returned home in afternoon with pain still in same region. Given milk of magnesia which was vomited; no further vomiting. Remained in bed the next day with pain in right lower quadrant. Went to school morning of day first seen or third day of disease, but returned home with severe pain in right lower quadrant and fever 100°F. No fever until third day. No history of any similar attacks in past; had been in good health and had never before consulted a doctor.

FAMILY HISTORY.—One brother, living and well; father and mother living and well. No tuberculosis contact.

PAST HISTORY.—No contagion except chickenpox and measles. Immunized against small pox, diphtheria and typhoid.

PHYSICAL EXAMINATION.—Well developed and nourished, not very acutely ill. Definite and localized tenderness on palpation over McBurney's point, with positive release sign. Slight spasticity of muscles of right side of abdomen; none on left. Examination otherwise not remarkable.

CLINICAL LABORATORY.—Blood: hb. 92 per cent; erythrocytes 4,400,000; leukocytes 9,000; polymorphs. 79 per cent, lymphocytes 21 per cent; no malaria found.

Urine: trace of albumin; many pus cells; no blood or casts.

PROCEDURE.—Appendectomy under general anesthesia; acutely inflamed bulbous tip. Normal convalescence.

Repeated urine specimens revealed many pus cells; no albumin, casts or blood.

Discharged on eighth day with instructions to return in two weeks for investigation of cause of pyuria.

READMISSION.—May 25, 1936. History of frequency of urination for two days and fever 104°F. on day before admission. No other complaint.

PHYSICAL EXAMINATION.—Slight tenderness in right upper quadrant at costal margin on deep pressure. Abdomen soft and flat with healed appendectomy scar.

CLINICAL LABORATORY.—Blood: leukocytes 28,700; polymorphs 83 per cent, lymphocytes 17 per cent; no malaria found.

Urine: No albumin; no sugar; few fresh and abnormal red blood cells; many pus cells.

INTRAVENOUS PYELOGRAM.—Skiodan, 40 per cent, 35 c.c. X-ray showed hydronephrosis, right.

CYSTOSCOPIC EXAMINATION.—By Dr. A. Street. Phenolsulphonphthalein test, intravenous; left Kidney—dye appeared at 8 minutes, 30 seconds, 10 per cent dye collected in first 15 minutes, 12.5 per cent in second 15 minutes, total 22.5 per cent for 30 minutes; no dye from catheter in right kidney pelvis; urine voided after 30 minutes showed 55 per cent dye,—a total of 77.5 per cent. Urine: left pelvis—no albumin, many fresh blood cells, 12 leukocytes per high power field, culture showed B. pyocyaneus; right pelvis—albumin 2+, many leukocytes, culture showed no growth. Retrograde pyelograms showed left kidney normal; hydronephrosis, right.

Mantoux (tuberculin) test, 1-1,000, negative.

Removal of right kidney advised. Discharged June 1, 1936.

READMISSION (SECOND).—June 22, 1936. History of apparently normal health since last discharge.

PHYSICAL EXAMINATION.—Normal.

Clinical Laboratory.—Blood: hb. 87 per cent; erythrocytes 4,180,000; leukocytes 7,700; polymorphs. 38 per cent, lymphocytes 57 per cent, monocytes 1, eosinophils 4 per cent; no malaria found. Coagulation time 1 minute, 15 seconds.

Urine: Trace of albumin; many pus cells. No sugar, no casts, no blood.

Blood Chemistry: urea nitrogen 10.27 mg. per 100 c.c.; uric acid 4.5 mg.; creatinine 1 mg.; chlorides 468 mg.; cholesterol 120 mg.; plasma proteins 4.67 per cent.

PROCEDURE.—Right nephrectomy June 26. Large hydronephrotic kidney with pelvic sac containing 130 c.c. of residual urine. Microscopic examination showed many pus cells.

Child had normal convalescence and returned home July 10. Urine on discharge showed none too many pus cells to high power field of centrifuged specimens.

HONOR ROLL

The following have contributed to the Mississippi State Medical Association section of the journal this month:

COUNTY EDITORS: Adams County, L. S. Gaudet; DeSoto County, L. L. Minor; Jefferson County, W. T. Harper; Leflore County, W. B. Dickins:; Sunflower County, H. B. Cottrell; Warren County, H. T. Ims; Washington County, John G. Archer; Yalobusha County, L. S Brown.—8.

SOCIETIES: Adams County, F. S. Dixon; Coahoma County, N. C. Knight; Homochitto Valley, L. S. Gaudet; Issaquena-Sharkey-Warren; South Mississippi Medical Society, Van C. Temple.—5.

HOSPITALS: Mississippi State Charity Hospital, Vicksburg, Edley H. Jones; Vicksburg Sanitarium.—2.

LETTERS.—16.

OTHERS: D. W. Jones; A. Street; T. Paul Haney, Jr.; Harvey F. Garrison; W. L. Little. —5.

TOTAL—36.

THANK YOU.

WOMAN'S AUXILIARY

TO THE

MISSISSIPPI STATE MEDICAL ASSOCIATION

President	Mrs. Adna G. Wilde *Jackson*
President-Elect	Mrs. C. C. Hightower *Hattiesburg*
First Vice President	Mrs. L. B. Otken *Greenwood*
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Mrs. Benson B. Martin had the pleasure of entertaining her sister and niece from Florida and another sister from Clarksdale, Miss., for several days last week. Several parties were given in their honor.

Dr. and Mrs. I. C. Knox and family are touring the west and from all reports are having a grand time.

Mrs. Leon Lippincott and son, Stanley have just returned from New Orleans, La.

Mrs. Tom Sparks and young daughter have been visiting Dr. Sparks' parents in Jackson, Miss.

Friends of Mrs. J. S. Ewing regret to know of her illness and hope for her a speedy recovery.

Dr. and Mrs. John Dent and son, Jack, are now residing in Vicksburg where Dr. Dent is associated with the Infirmary as pediatrician.

Dr. and Mrs. Edley Jones and son are enjoying a motor trip to Yellow Stone Park and other places of interest.

Mrs. Sidney Johnston is expecting a visit this month from her niece, Mrs. Hugh McLaurin, of Pennsylvania.

Mrs. M. H. Bell is enjoying a vacation on the coast.

MRS. PRESTON S. HERRING,
Chairman of Publicity Committee

TRI-COUNTY WOMAN'S MEDICAL AUXILIARY

The Tri-County Woman's Auxiliary met on Tuesday, August 11th with Mrs. A. J. Stacy and Mrs. Carl Feemster. Jr., had arranged a delightful program. Two very helpful talks were made, the first by Mrs. J. H. Ledyard on "What Every Auxiliary Member Should Know," the second by Mrs. James Finley on "Public Health in Mississippi." Both of them were very interesting and instructive.

A. G. Bowen, Miss Virginia Shaw and Jack Stacy gave several delightful musical numbers. All three are talented young Tupelo musicians, and the auxiliary is indebted to them for coming to us on a hot August day.

There being no business the meeting adjourned to convene again the middle of November for the annual business meeting.

MRS. W. H. CLEVELAND

(PUBLISHER'S NOTE:—The following was omitted from Dr. Gant's article in the August issue of the journal, and follows immediately after page 25.)

Saturday evening, September 11, and there remained until November 16. Of the work at Biloxi, a joint report of Dr. Haralson and myself will give details.

H. A. GANT, M.D.
Water Valley, Miss., Nov. 20, 1897

The post mortem held on the body of Mr. Seymour was of the greatest importance and significance, and settled the question that had baffled so many able men. A committee consisting of Lucien E. Solomon, M.D., O. Czarnowski, M.D., O. Farrar Patton, M.D. of the Board of Experts, and Dr. H. H. Haralson, member of the Mississippi State Board of Health, and O. L. Bailey, M.D., and J. H. Bemis, M.D., local physicians had reported the disease to be dengue. On Monday, the 23rd of August. and on the 27th the following gentlemen, H. H. Haralson, O. L. Bailey, W. H. Sanders, Health Officer of Alabama, and J. H. Bemis, reported after having again investigated that the disease was abating and absolutely without fatality now. The conclusion arrived at was that is was not yellow fever. Subsequently on the morning of the fourth of September, Saturday, another investigation was made by Drs. Sanders, Goode, Haralson, and Wasdin, and an autopsy was held by Drs. Sanders, Wasdin, and Haralson and it was agreed by all. that the disease was yellow fever. The disease was evidently quite a puzzle to Dr. John Guiteras. He and I visited many cases on Wednesday, the 8th of Septembr, and at night after the arrival of Dr. Murray, he and Murray had a consultation. Afterwards, I had an interview with Dr. Murray and was convinced that he thought the disease was yellow fever. He asked my opinion about it. and I said that it probably was yellow fever, but of very much milder type than any I had seen. The next morning at the necropsy on the body of Mr. Seymour, Dr. Murray and I were sitting close together. Dr. Wasdin, who in after years performed the autopsy on the body of our great and good President McKinley, did the operating. And when he cut into the liver it showed fatty degeneration. Dr. Murray nudged me, and whispered "Yellow Fever," to which decision all agreed.

Dr. Wasdin came down with yellow fever within 5 or 6 days after that autopsy, but soon recovered. Of the nine doctors present, I think I am the only one now living. Possibly Dr. Bailey as he was a younger man than most of us, is still alive. It is probable that no other outbreak of yellow fever in the United States up to this time was of such mild character and was attended by so much difficulty of diagnosis. And this is not to be wondered at when it was stated that two hundred cases had developed in Ocean Springs before there was a single death. It is not surprising that other doctors and the people were in doubt about the nature of the disease, when such an eminent authority as Dr. John Guiteras thought all the cases he saw on Wednesday, the 8th inst. were dengue, except three, and with regard to these, he withheld his opinion until after the post mortem on Mr. Seymour. This epidemic was mild not only at Ocean Springs, but all along the coast and the people, because they were not afraid of it, were rather hard to manage. In the interior of the State, upon the announcement of the nature of the disease, he old time panic, fear and terror, with recollections of 1878, prevailed throughout the State, and quarantine everywhere was the rule, just as it had been in former years. So health authorities had to contend with indifferene and lack of fear on the coast and extreme panic in other parts of the State. It was on Wednesday night, the 8th of September, that I first met Surgeon H. R. Carter, one of the most important figures in the management of the epidemic, and with whom I was to be closely, and pleasantly, associated for three years. I was very favorably impressed by Dr. Carter, on first meeting him. He said, "Gus Evans, of Chicago, has said some nice things about you, and told me to meet you." Dr. Evans and I were members of the Mississippi State Medical Association in the early nineties, and if I remember correctly, he is the one who first nominated me for recommendation by the Association for the position on the State Board of Health. He writes articles "How to Keep Well" in the Chicago Tribune, syndicated for the press. The medical profession, especially in Mississippi, is very proud of Dr. Evans' eminent success. I remember a conversation I had with him in Chicago many years after his establishing himself there, when I said, "Gus, how is it you have won such a splendid standing, and have gotten so high up on 'easy street'?" He replied, "Work, work, and more work."

On the trip to select the site for a detention camp at Fontainbleau, Dr. Dunn and I, representing the State Board of Mississippi, became better acquainted with Carter and Murray, representing the Marine Hospital Service. We discussed freely methods of handling the situation. I found both of them remarkably well-informed and pleasant gentlemen. Carter was particularly attractive to me. He was so sociable and approachable, and willing to communicate information, and had nothing of the martinet in his make-up.

Dr. Carter of the Marine Hospital Service was in charge of all quarantine and health requirements and regulations during this epidemic, with headquarters in New Orleans. He set to work at once trying to bring some order out of the conflicting regulations of the towns, counties, and states. In this he had many trials, and many obstacles to overcome, for the people were very unreasonable, and often times doctors disagreed with the health officers, and caused much opposition to the enforcement of regulations promulgated by them.

Program and Invitation of the

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Third quarterly meeting Tuesday, Sept. 15, 1936 at Amory, Monroe County, 1:00 p. m. First Baptist Church. Following the scientific program the visiting doctors and their wives will be served a dinner in the dining room of the Hotel.

House called to order by President Dr. Z. A. Dorsey.

Invocation.

"The Nutritional Requirements in Infancy," Dr. Robert A. Strong, Tulane University, New Orleans, La.

"Tuberculosis a Surgical Disease," Dr. W. H. Sutherland, Booneville.

"Immunization," Dr. Harvey F. Garrison, Jackson.

"Suprarenal Portex Hormone," Dr. R. A. Street, Jr., Vicksburg.

"Diagnosis of Uterine Hemorrhage," Dr. Stanley A. Hill, Corinth.

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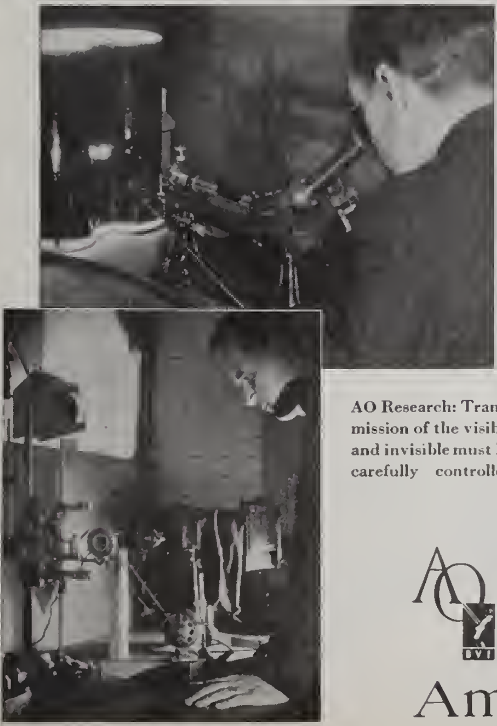

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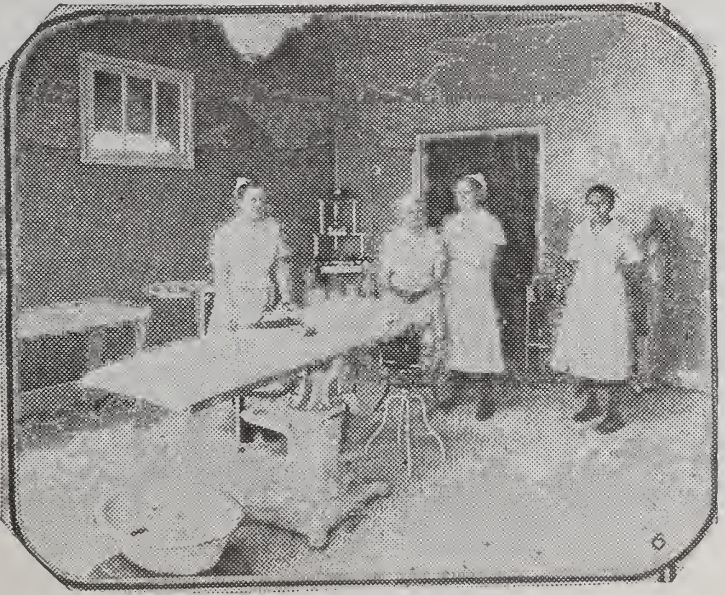

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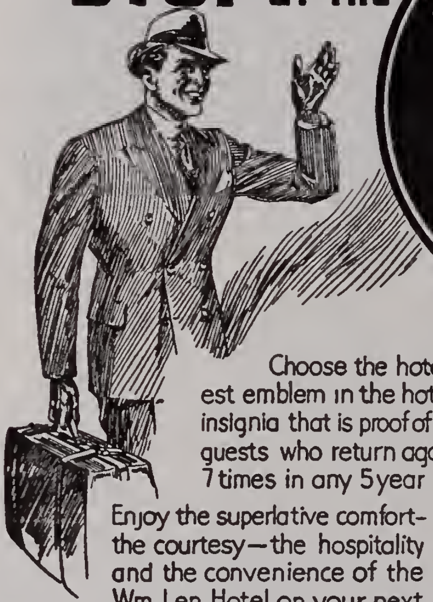

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The Heart As A Surgical Organ*

A Discussion of Cardiac Trauma, Cardiac Compression and the Development of a New Blood Supply to the Heart By Operation.

by Operation.

CLAUDE S. BECK, M.D.

MR. CHAIRMAN and Members of the Mid-South Post-Graduate Medical Assembly:

It is an unique event for a surgeon to discuss the heart. Every other organ in the body has maladies some of which are treated by internists and others by surgeons. The maladies of the heart, however, are almost entirely the concern of the internist and practically none concern the surgeon. Because of this unusual situation I hope that I may succeed in presenting the surgical point of view concerning certain disorders of the heart. I am sure the internist will turn over to the surgeon any cardiac conditions that he is able to treat. The surgeon has kept away from the heart for several good reasons. In the first place, the heart is always in motion and a new set of surgical reflexes is necessary to operate upon the heart. Every other organ in the body stands still for the surgeon while he operates. Even the pituitary gland, difficult as its exposure may be, stands still at operation. In the second place, the heart has a frightful capacity for hemorrhage. It is the only muscular structure in the body that carries blood under high pressure. The myocardium is tense from the pressure within. It is friable and easily torn. Any surgical manipulation on the wall of the heart may lead to rupture and hemorrhage. Thirdly, the heart is a sensitive organ. Every time its surface is touched, it responds by an extrasystole and if these extrasystoles are repeated frequently the myocardium may fibrillate, and from this there is no recovery. I do not know why, but I suppose it was for reasons similar to these that Billroth, the great gastric pioneer, was prompted to say that a heart operation was a prostitution of surgical skill. At any rate, very little attention was given to the heart during the great age of surgical pioneering, 1887-1910. The first quarter of the twentieth century went by and the heart did not receive serious study by any surgeon either in America or abroad. What was done was of a sporadic nature. I began my first experiments on the heart in 1923. My point of view at that time was similar perhaps to the point of view entertained by many in the audience today, namely, that there were no surgical problems concerning the heart that needed elucidation. I felt that the surgeon working on the heart was working in a blind alley. The yield for our efforts during the first years was very little. As the years went by an experience accumulated and certain problems in cardiopericardial surgery began to take on a clear and distinct form. After this point was reached, the solution of these problems became a matter of observation and experiment. The number of experimental operations on the heart done by my associates and myself in the last twelve years is well over 1200, perhaps 1800. Out of this experience came a good many developments which are entirely new. Some of these, I believe, are of great importance. The heart is at the threshold of a very nice development in surgery. Indeed, the time is not far off when operations upon the heart will be almost as common as operations upon the vermiform appendix.

I am going to present three subjects for discussion: (1) Trauma of the heart; (2) Compression of the heart, and (3) The development of a new blood supply to the heart by operation.

CARDIAC TRAUMA

When I mention cardiac trauma one thinks only of the penetrating wound—the stab or gunshot wound of the heart. Concerning the penetrating wound I shall only present a method by which such wounds can be successfully sutured. This method is illustrated in figures 1 and 2. Under no circumstances should a finger be placed into cardiac wound because the myocardium tears and the wound is made larger. A suture in the apex is essential in handling the organ. If an auricular wound is present the technique is entirely different. If a finger is placed on an auricular wound, the bleeding will not stop. The bleeding auricle retracts beneath the finger. The margin of an auricular wound should be grasped in clamps and then sutured. The margin of a ventricular wound should never be grasped in clamps because the ventricle crumbles in the clamp.

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*An address delivered to the Mid-South Post-Graduate Medical Assembly, February 13, 1936, at Memphis, Tenn.

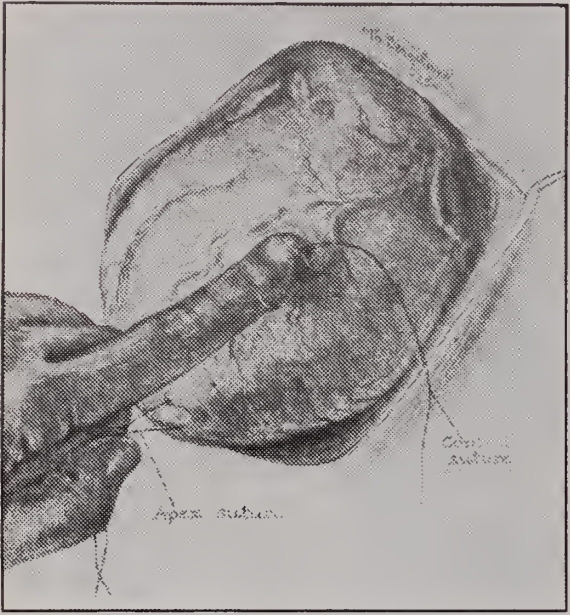

Fig. 1.—The author's method of suturing wounds of the ventricles. The pericardium is incised and bleeding from the heart is disregarded until a suture has been placed in the apex of the heart. This suture is held between the thumb and third finger while the index finger is laced upon, not in, the wound of the heart. The index finger can be maintained upon the wound because the finger moves with the heart. A suture is laced on each side of the wound.

I should like to direct your attention to another type of cardiac wound, a type that has been almost completely overlooked, namely the nonpenetrating wound. I have adequate reasons to believe that contusions of the heart are more common than stab or bullet wounds of the heart. This lesion has been almost entirely overlooked in so far as recognition during life is concerned and entirely neglected in so far as surgical treatment is concerned. It is difficult to understand why the profession has given to the heart an immunity to contusion because the heart occupies practically all the space between the sternum anteriorly and the vertebrae posteriorly. Any force applied to the chest may reduce this space and any decrease in the antero-posterior diameter of the chest directly affects the heart. The most common type of injury producing cardiac contusion is what I have called the steering wheel type of accident, figure 3. In this age of automobiles this type of accident is entitled to a classical place in traumatic surgery. It should be looked for in every injury of the chest and especially in the steering wheel type of injury.

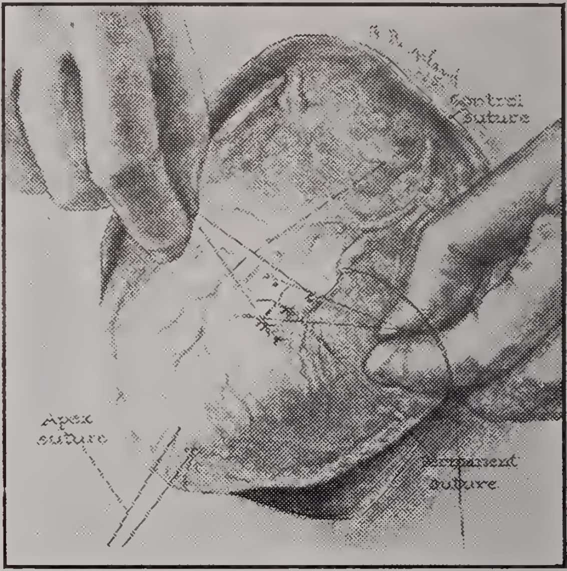

Fig. 2.—The control sutures are crossed and held by the assistant. The finger is then removed and gentle traction is applied to the control sutures. The wound is now exposed. There is no bleeding. Permanent sutures are placed in the wound.

Accurate diagnosis is often difficult, sometimes impossible. Experimentally the heart rate increases after contusion but it can become slower after injury. The arterial pressure momentarily falls but usually returns promptly to the normal level. The heart sounds may be of reduced intensity. A pericardial effusion may or may not develop after the injury. Cardiac pain, anginal in type, may be present. The electrocardiograms show alterations from

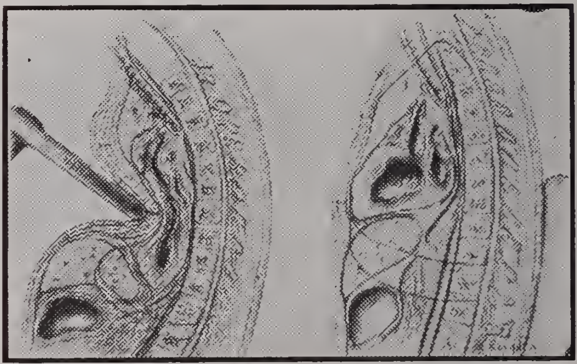

Fig. 3.—The steering wheel tye of accident producing contusion of the heart. The heart is driven against the spine. Transient dyspnea and weakness are the usual symptoms. In the more serious causes circulatory collapse may develop. Auricles or ventricles may be ruptured.

the normal, similar to the alterations produced by a myocardial infarct. Auricular fibrillation may develop. This may be transitory or permanent. Healing takes place by fibrosis and the pericardium becomes adherent to the area of contusion in the heart. This adhesion is silent in so far as diagnosis is concerned. Recovery is the rule after a cardiac contusion but diagnosis usually is not made if the patient recovers. Only a few cases have been recognized clinically and almost all the cases in the literature were recognized only at necropsy examination. The patient may recover without signs or symptoms of any cardiac difficulty or he may recover and show signs of failure, precordial pain, auricular fibrillation, or cardiac asthma. An aneurysm of the heart may develop. Death may occur from rupture of the heart, or from tachycardia and failure.

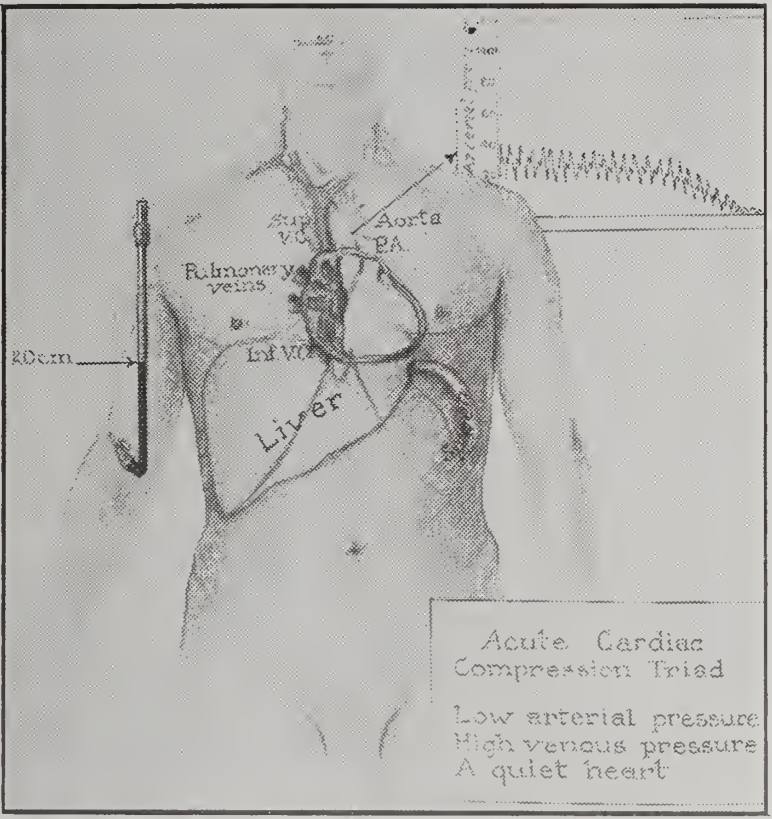

Fig. 4.—Acute cardiac compression triad.

The minimal signs and symptoms upon which a diagnosis of cardiac contusion can be made consist of: first, the patient had no evidence of a cardiac abnormality prior to the accident; second, the history of an accident involving the precordium, and third, weakness immediately following the accident.

The treatment consists of rest until a supporting scar forms at the area of contusion. Any rise in the intracardiac pressure may produce a rupture of the heart. In the 157 cases analyzed by Dr. Bright and myself we found that some chance for operative intervention existed in about 25 per cent of the cases. Not a single case of cardiac rupture has been operated upon. The operation consists of sutures of the wound if possible. We have shown experimentally that the heart can be strengthened or reinforced by a graft of facia lata or pericardium placed over the contusion. This operation has never been done on a human being. In the future it may be applicable also in reinforcing an infarcted area due to coronary thrombosis. Development along this line undoubtedly will take place in the future.

CARDIAC COMPRESSION

Compression of the heart is the diametric opposite to dilatation of the heart. We are all acquainted with the dilated heart; few of us are acquainted with the compressed heart. The dilated heart is a medical disorder. The compressed heart is a surgical disorder. Operation can save life. It is frequently urgent. The results of operation are among the triumphs of modern surgery.

Compression of the heart may be acute or chronic. Acute cardiac compression produces (1) a falling arterial pressure. (2) a rising venous pressure, and (3) a small quiet heart. This triad of symptoms (fig. 4) is diagnostic of the acutely compressed heart. Experimentally a compression force of 14 to 16 cm. of water applied to the heart is fatal. This measurement for man has never been determined but I believe the pressure producing death would be about the same for man. The lesions producing acute cardiac compression are usually collections of fluid in the pericardial cavity. The fluid may be blood, pus or a sterile transudate. Blood may come from a stab wound of the heart, from the aorta, pulmonary artery, venae cavae, internal mammary vessels, etc. It may come from a spontaneous rupture of the heart or from a rupture associated with a myocardial infarct. It may occur in diseases of a hemorrhagic diathesis. Acute compression of the heart can develop from pressure of a gas. The gas may be air sucked in through a penetrating wound or from a wound of the lung. It is associated with valvular pneumothorax. The gas may arise from an infection of a gas-producing nature.

Chronic cardiac compression produces (1) a high venous pressure, (2) ascites, and (3) a small quiet heart. This triad of symptoms (fig. 5) is diagnostic of the chronically compressed heart. The highest venous pressure that I have found was 42 cm. of physiological solution of sodium chloride. These highest pressures occur in patients in whom the heart is compressed in scar tissue. Measurements of the compression-force exerted directly upon the heart cannot be taken in such cases because of the scar. I have had cases in which the compression was due to fluid, and direct pressures upon the heart of 20 to 30 cm. have been obtained. I want to emphasize this point, that the pressure in the great venous gateway to the heart (intrapericardial segments of the venae cavae and the right auricle) must always be higher than the pressure outside these structures. In other words, a positive pressure differential is always necessary between the pressure in the venae cavae and the pressure upon the heart. If the heart is compressed by a force of 30 cm., the pressure in the venous system must be 30 plus cm. If the pressure in the venous system is 42 cm. the compression upon the heart must be 42 minus cm. This is an enormous pressure upon the heart and such pressures are scarcely compatible with life. It is interesting to recall that in the acute condition 14 to 16 cm. is fatal, whereas in the chronic condition a much higher pressure can be tolerated.

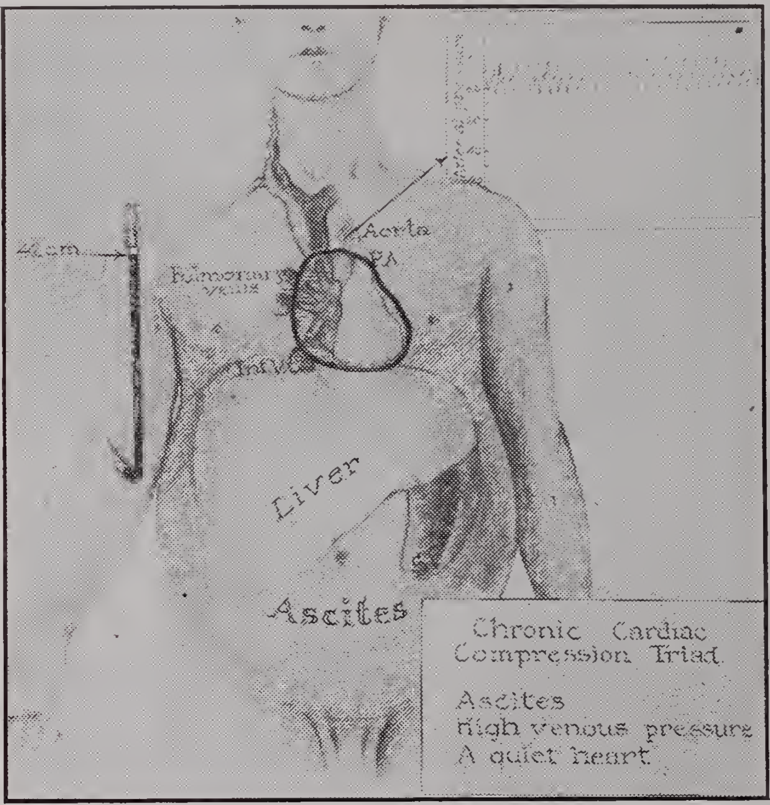

Fig. 5.—Chronic cardiac compression triad.

Various other clinical manifestations of chronic cardiac compression are present. The high venous pressure stretches the walls of the veins so that they become prominent (fig. 6). The liver also undergoes enlargement and serum filters through the capillary walls producing subcutaneous edema. Because of the slowly moving circulation cyanosis and dyspnea are also present. On the arterial side of the circulation we find a low pulse pressure, a low systolic pressure and pulsus paradoxus. The electocardiogram shows low voltage and slurring. The nutritional state is below normal. The heart is always small. A compressed heart cannot dilate nor can it hypertrophy. In some cases a glance at the precordium tells you whether or not the heart is compressed. If precordial pulsation is present, the heart is not compressed. This observation can save the surgeon the embarrassment of operation upon a dilated heart with ascites and failure.

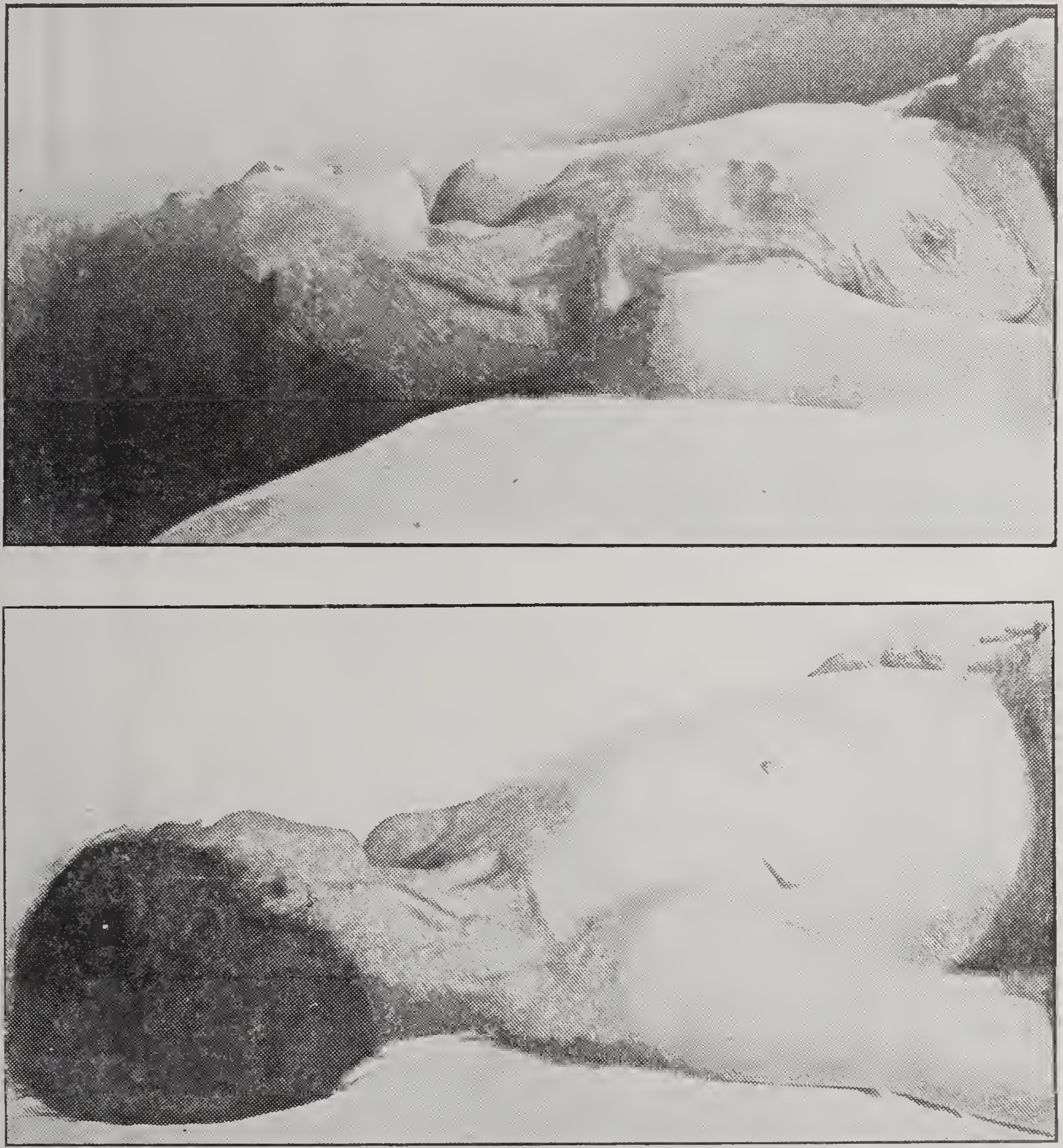

Fig. 6.—Photograps of patient with cardiac compression. A. The patient with dilated and tortuous veins in the neck and chest before operation. B. The patient one year after the pericardial scar was resected. The veins over the chest are no longer visible.

The heart sounds in the compressed heart are faint and distant. There are no murmurs. The systolic diastolic excursion of the heart is reduced. This can be determined by fluoroscopic examination. The size of the cardio-pericardial shadow varies with the lesion producing the compression. If the compression is due to fluid this shadow is large; if it is due to scar tissue around the heart, the shadow is small. A neoplasm or an abscess may produce a unilateral shadow, (fig. 7).

Treatment of cardiac compression is always surgical. These forms of circulatory failure are mechanical. They should, and do, yield to mechanical methods of treatment, namely, operative (fig. 8). Fluid can be removed by aspiration in some cases but in other cases pericardiotomy must be done. Hemorrhage must be controlled by suture. Pus must be removed by open drainage provided it is not tuberculous. Tuberculous pus must be removed by aspiration. Scar tissue is removed by delicate dissection from the heart. Neoplasms can be removed.

THE DEVELOPMENT OF A NEW BLOOD SUPPLY TO THE HEART BY OPERATION

The only direct continuity between the heart and the rest of the body is through the structures at its base—the great vessels, fat, lymphatics and nerves. Because of its anatomical arrangement the heart has been deprived to a great extent of an important compensatory property, namely, the ability to develop a collateral circulation to meet an emergency, to preserve life during the first few moments, days and weeks after a serious coronary accident. If life is preserved over a sufficiently long period of time after coronary occlusion has taken place, a collateral circulation of variable efficiency is produced. However, the appalling incidence of death from coronary occlusion attests to the destructive nature of this disease. It attests also to the inadequacy of all compensatory circulations in so far as the preservation of the heart beat is concerned.

To attempt to give the heart new blood supply by grafting tissues onto the myocardium was an entirely new principle in surgery.* I began the experiments in February, 1932. The results for a time were discouraging. Before our experimental study was begun two facts existed that gave some encouragement to proceed with the work. One was the demonstration of small blood vessels in the fat at the base of the heart anastomosing with the coronary system. The other was the presence of blood vessels in cardiopericardial adhesions. Whether these extracardiac anastomoses were of any functional value was not really known at the time our experimental study was begun. The general opinion was that they had no functional significance. When these experiments were begun we did not know in the first place whether anastomotic channels

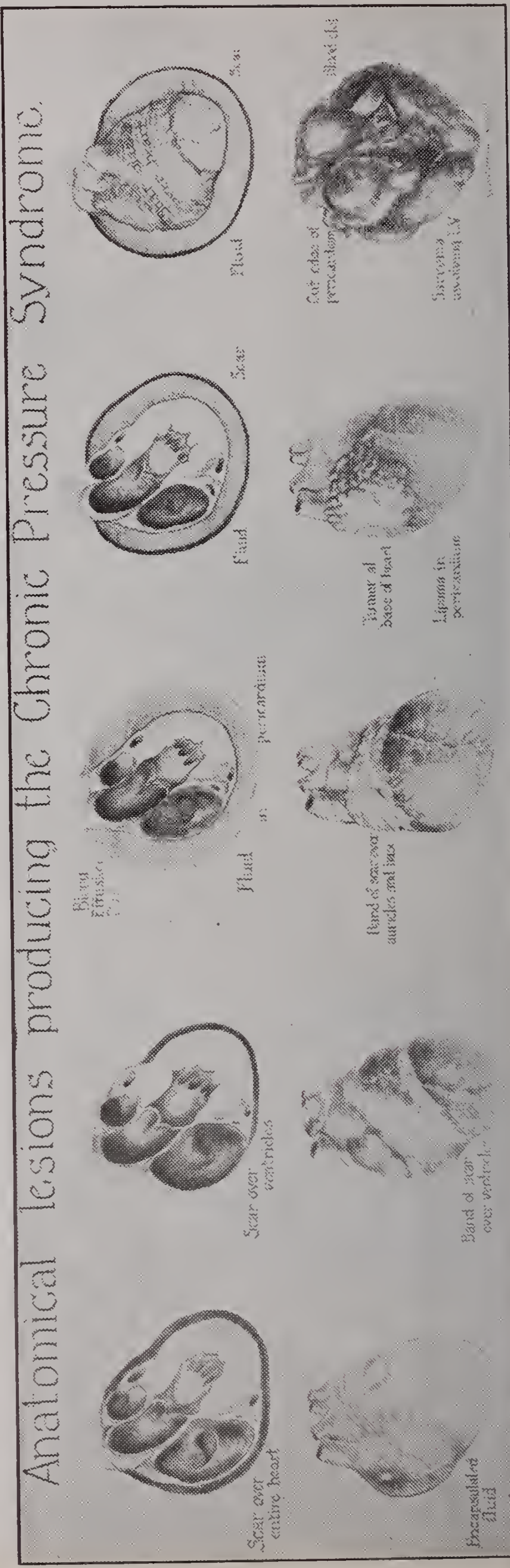
Anatomical lesions producing the Chronic Pressure Syndrome.
Scar over entire heart
Encapsulated fluid
Scar over ventricles
Band of scar over ventricle
Bloody Effusion
Fluid in pericardium
Band of scar over auricles and base
Fluid
Scar
Tumor at base of heart
Lipoma in pericardium
Fluid
Scar
Cut edge of pericardium
Blood clot
Sarcoma involving LV

Fig. 7.—Anatomical lesions producing the chronic compression syndrome.

---

*This principle consists of the vasculatization of an organ by the establishment of a collateral arterial or arteriolar bed. It involves the union of blood vessels that are too small for anastomosis by means of surgical suture. It can be regarded as a type of plastic operation. The nearest approach to this operation is the Talma-Morrison operation for cirrhosis of the liver, but this operation involves venous rather than arterial anastomoses. In the experimental studies on this subject I had the good fortune of having the invaluable assistance of Drs. V. L. Tichy, Allan R. Moritz, Frederick Mautz and Ernest F. Bright. The operative work was done on dogs.

could be produced and secondly whether if produced they could transport sufficient quantities of blood to benefit the myocardium to any appreciable degree. Our experiments have to do with these two major considerations.

EXPERIMENTAL DATA

1. A collateral vascular bed was produced by the following methods: The mesothelial envelop around the heart was destroyed by roughening the lining of the parietal pericardium. The epicardium was roughened or removed in shreds by means of a burr. Destruction of the epicardium and mesothelial lining of parietal pericardium can be accomplished by chemical agents, but up to the present time we have not decided upon a chemical agent that gives satisfactory adhesions and at the same time does not produce a profound reaction in the adjacent tissues. Construction of a vascular bed was carried out by bringing the various grafts onto the myocardium. The tissues that were used for the new vascular bed were fibrous pericardium, pericardial fat, pedicle grafts of skeletal muscle from the chest wall, or omentum brought up through an opening in the diaphragm. Anastomoses between the grafts and the heart could be demonstrated in three weeks after the grafts were placed. Anastomoses increased after a physiological

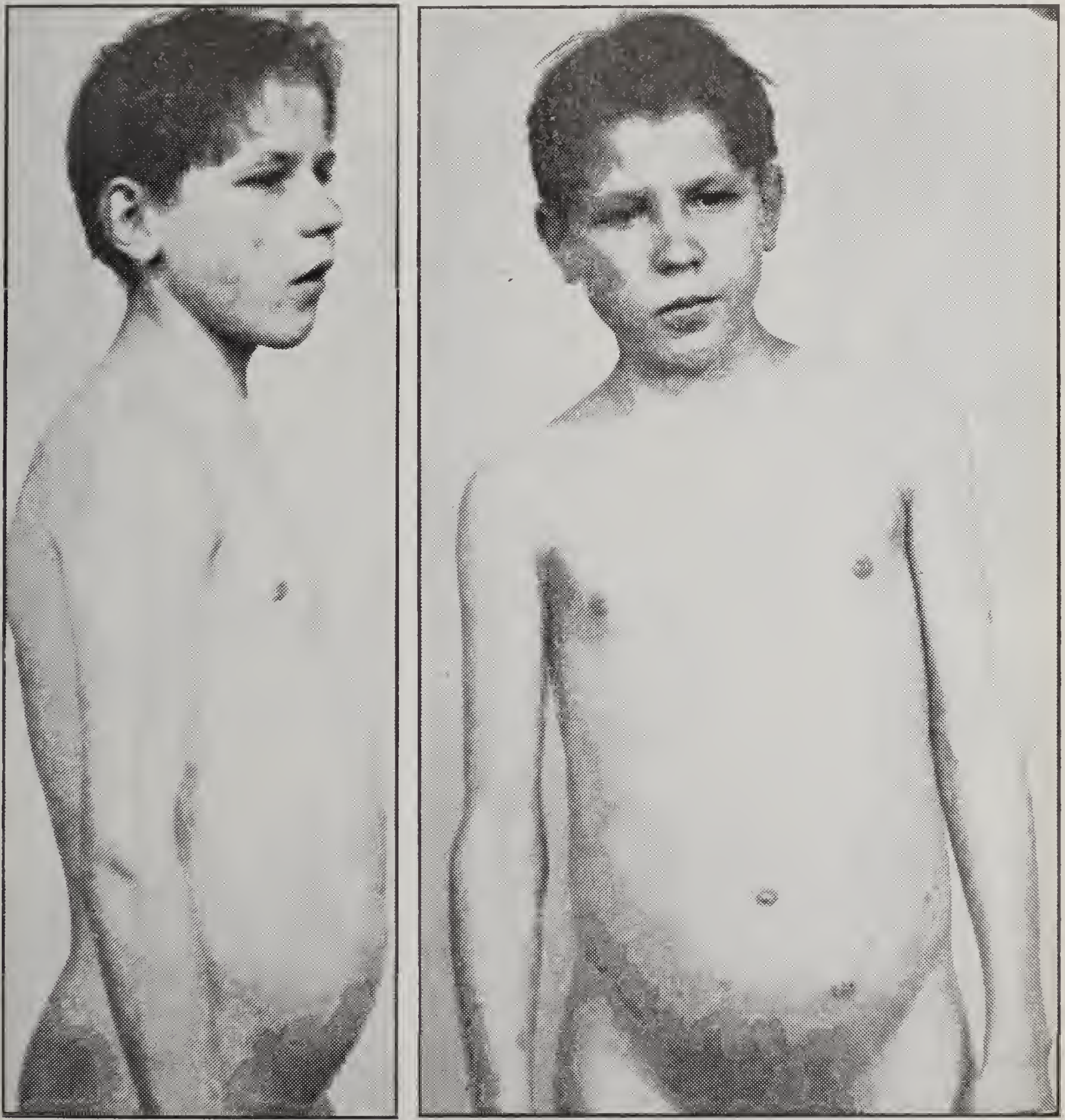

Fig. 8.—Patient with chronic cardiac compression due to pericardial scar. A. Before the scar was resected. Note the ascites, and the anxious expression. The patient was a cardiac invalid.

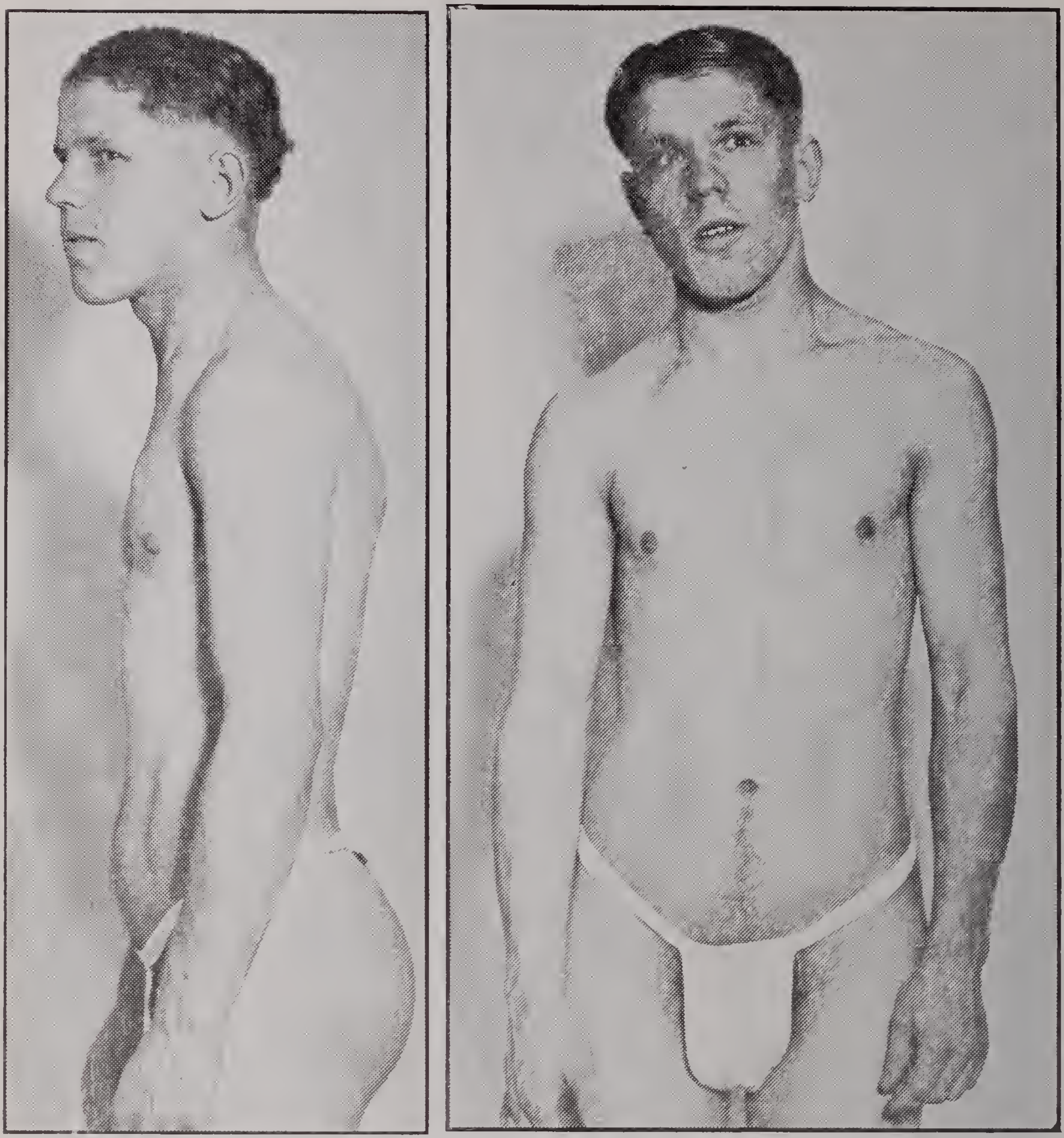

Fig. 8.—Patient with chronic cardiac compression due to pericardial scar. B. The same patient six years after operation. Complete cure.

need for blood was established in the myocardium. The physiological need for blood is more accurately defined as a pressure-differential between the vascular bed of the grafted tissues and the vascular bed of the myocardium. The pressure in the coronary system was reduced by occlusion, partial or complete, of major coronary arteries.

2. Anastomoses were demonstrated in two ways.

a. They were demonstrated by injection of dye into the myocardium by way of the grafts. This was done by excluding every portal of entry into the heart except the extracardiac anastomoses. The venae cavae and azygos vein were ligated and the right auricle was opened so that nothing could enter the right side of the heart. The aorta was clamped. It was cut between clamp and heart so that injection through coronary arteries and thebesian vessels was impossible. Dye was then injected into the aorta through one of the carotid arteries. The normal heart injected this way showed a little dye in the major coronary arteries, a little in the fat at the base of the heart but no capillary injection of myocardium. The hearts with a collateral vascular bed showed varying degrees of capillary injection. As a rule the greater the degree of coronary occlusion the more marked was the degree of injection of myocardium with dye. The hearts with both coronary arteries occluded showed a widespread deep staining of the myocardium.

b. Anastomoses were also demonstrated by injecting a solution of barium sulphate into a coronary artery and tracing the solution in the chest by roentgenograms. The solution of barium sulphate had the consistency of thick cream. It was too thick to enter the capillaries. The experiment was carried out as follows: The heart was given a collateral vascular bed and a pressure-differential was produced by occlusion of the right coronary artery. Several months later the left coronary artery was injected. Roentgenograms showed the opaque mass in both right and left coronary arteries. From the heart it spread to the chest wall and filled the internal mammary, many intercostal, diaphragmatic, and epigastric arteries. If barium of such consistency could flow from the coronary arteries through the grafts and into the arteries of the chest wall, one might conclude that blood, which is of thinner consistency than the injection mass, could flow from the chest wall into the heart.

3. The heart was given a collateral vascular bed and at the same operation partial occlusion of one of the coronary arteries was produced by means of a silver band placed around the artery, close to its origin from the aorta. Several weeks later this artery was completely occluded. The right coronary artery or the ramus descendens of the left coronary artery could be occluded with recovery as a routine without infarction if the occlusion was done in two stages. As yet we have no control experiments for comparison. Whether these arteries could be occluded in two stages with recovery as the rule in the absence of a collateral bed cannot be stated.

4. The heart was given a collateral vascular bed. Occlusion of the coronary arteries was carried out in four or five subsequent operations. It was possible to occlude completely the right and both major branches of 'the left coronary arteries. The entire coronary supply was cut off except the septal branch which comes off above the bifurcation of the left. This was accomplished with recovery and without infarction.

5. The heart was given a collateral vascular bed. Several weeks later the right coronary artery was ligated completely in one stage. The mortality was 4, recovery 8. The right coronary artery was ligated in normal dogs for controls. The mortality was 7, recovery 3. It appears that the vascular grafts protect the heart against sudden complete occlusion of the right coronary artery. In this respect it is a prophylaxis. A similar statement can be made concerning ligation of the ramus descendens of the left.

6. Two types of experiment are presented for comparison.

a. The right and both major branches of the left coronary arteries could be occluded about one third of their cross section in one stage with recovery.

b. Complete ligation in one stage of four or five peripheral branches of the coronary arteries over the apex of the left ventricle was always fatal. Ventricular fibrillation developed. (fig. 9)

The total amount of blood going through the coronary system in **b** can be assumed to be greater than in **a**; yet **b** was a fatal experiment and **a** resulted in recovery. These experiments bring out an entirely new point in so far as the heart is concerned, namely, the importance of an equal distribution of blood to the myocardium. Total coronary blood flow is one factor that concerns the preservation of the heart beat, but distribution of blood flow is another important factor. We were slow to appreciate this fact. We had a great many fatalities before we learned that multiple peripheral ligations of coronary arteries could not be tolerated. The ischemic area predisposed to the development of myocardial fibrillation.

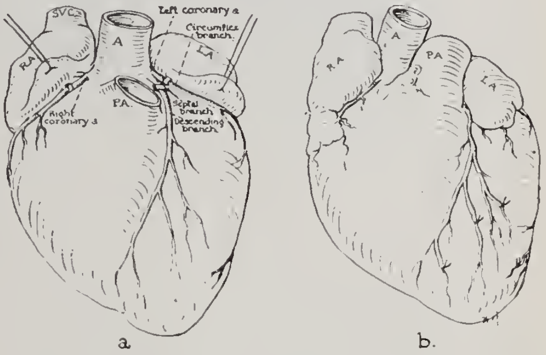

Fig. 9.—Two types of operations are shown: (a) shows the usual sites where silver bands were applied to the coronary arteries. A reduction of 30 to 50 per cent in the cross sectional area of these three arteries was compatible with life. (b) shows another type of experiment. Four or five peripheral branches of the coronary arteries over the apex of the heart were ligated. This experiment was always fatal. In (a) the reduction in total coronary blood flow was considerably greater than in (b). The heart cannot tolerate ischemia of a severe degree even though the area of ischemia is small. The collateral bed produced by operation can transport blood to such ischemic areas.

7. The collateral vascular bed can function in effecting an equal distribution of blood to various parts of the myocardium. This is effected in two ways: first, by bringing blood from extracardiac sources into the myocardium,

and second, by transporting blood from one part of the heart where the circulation is good to another part of the heart where the circulation is deficient. In the latter respect the grafts act as anastomotic bridges connecting the beds of different vessels.

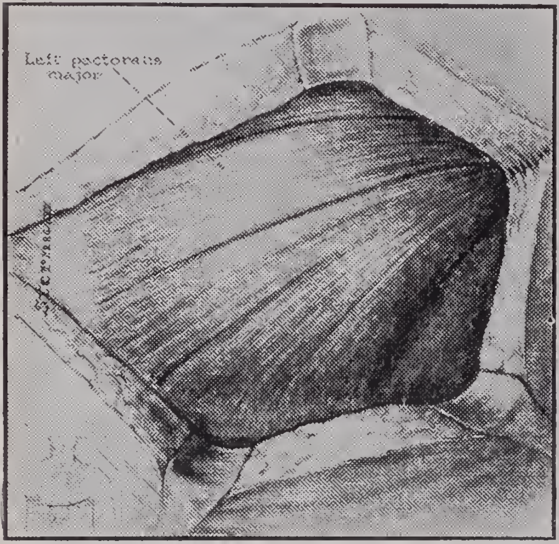
Left pectoralis major
Sternum

Fig. 10.—The inferior portion of the left pectoralis major muscle is exposed through transverse incision. The incision in the skin is shown in the inset.

8. The grafted tissues do not seem to interfere with the movements of the heart. This statement was based upon observations of about five hundred experiments in which grafts were placed upon the heart. Cardiac adhesions are usually silent and incidental lesions.

APPLICATION OF EXPERIMENTAL DATA TO PATIENTS WITH CORONARY SCLEROSIS

An attempt was made to increase the blood supply to the myocardium by means of grafting tissues onto the heart in patients with coronary sclerosis. The operation has been carried out on ten patients. They all had advanced coronary disease but none of them showed myocardial failure at the time the operation was done. There were four fatalities. Three developed arterial thromboses after operation: one at the bifurcation of the aorta, another in the middle cerebral artery, and the third in the circumflex branch of the left coronary artery. The fourth developed me-

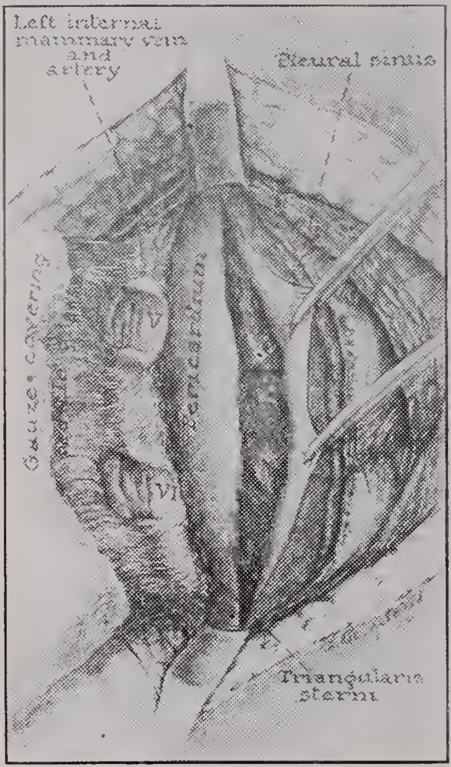
Left internal mammary vein and artery
Pleural sinus
Gauze covering
Pericardium
V
VI
Triangularis sterni

Fig. 11.—The pectoral muscle is dissected from the chest wall and is incised laterally to make a graft with the pedicle attached along the sternal margin. The fifth and six costal cartilages are removed. The mammary vessels are avoided. The parietal pericardium is opened.

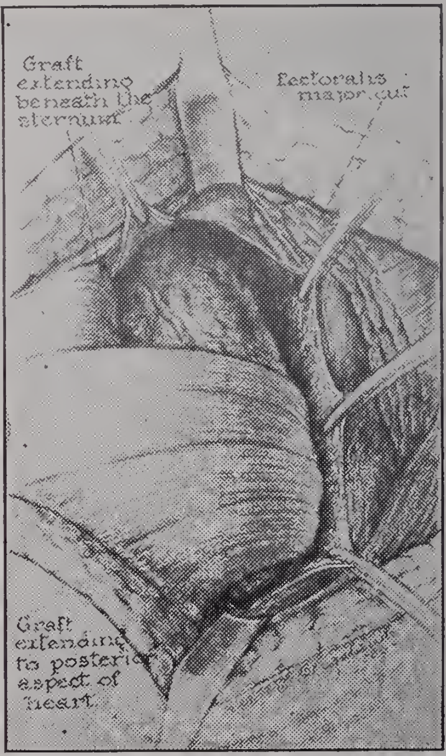
Graft extending beneath the sternum
Pectoralis major cut
Graft extending to posterior aspect of heart

Fig. 12.—The lining of the parietal pericardium and epicardium is roughened by a burr. The graft is divided into two parts. One is placed beneath the sternum to the right ventricle. The other is placed around the left ventricle. The pericardial cavity is left wide open so that adjacent vascularized tissues are in contact with the anterior aspect of the heart.

diastinitis due to the Welch bacillus. The patients were selected by Dr. Harold S. Feil who has supplied the following notes.

"The first patient was a farm laborer, aged 48 years. He had typical substernal pain on effort of two years' duration. He finally was forced to give up his work because of pain. His blood pressure was normal. No other cause for the substernal pain could be determined. The usual step-test was followed by substernal pain, fatigue and dyspnea. Twelve months after the operation his tolerance for exercise has increased greatly. He is employed as a gardener and has been shoveling snow during the past few weeks. He is able to perform his work without pain or even discomfort. The result is excellent."

"The second patient was an executive of 51 years. He had typical angina of effort and emotion of seven years' duration, not relieved by medical treatment. Two years ago he had to retire. Eighteen months ago he had a total thyroidectomy. He kept his basal metabolic rate at about minus 20 by taking thyroid extract. He spent 20 to 22 hours per day in bed. The operation of cardiac anastomosis was done in June, 1935. Seven months have elapsed since the operation. Since the operation he has had but one mild attack of anginal pain and this in view of the fact that his daily dose of thyroid extract has been trebled and his basal metabolic rate has been normal. He is out of bed six to eight hours daily. He feels that the operation has been decidedly beneficial. His tolerance for exercise has definitely increased. He has not taken nitro-glycerine since the operation."

"The third patient was a surgeon, aged 50 years. He had unquestioned subjective and objective evidence of coronary sclerosis with cardiac pain on effort of five years' duration. His condition became refractory to treatment. He was completely disabled for three and one-half years. He probably had coronary thrombosis one and one-half years before operation. He also had sclerosis of the arteries of the legs, and mild diabetes. Seven months have elapsed since the cardiac anastomosis was done. His tolerance for exercise has increased slightly. His pulse rate continues to be rapid at times. He still has cardiac pain brought on by emotion. This patient has shown some improvement but the improvement has not been so marked as in the other patients. He states that his attacks of pain are less frequent and less severe than they were before operation. It is probable that he has advanced myocardial fibrosis of a permanent nature."

"The fourth patient was a machinist, 55 years old. He had typical cardiac pain of effort of two years' duration and was incapacitated from his work for five months. He had moderate generalized arteriosclerosis, with a blood pressure of 120 mm. Hg systolic and 90 mm. Hg diastolic. He could take only a small amount of exercise when pain caused him to stop. Typical electrocardiographic changes were seen with the pain. Twenty days after the operation he was walking around the ward without pain. He has had no pain or discomfort since the operation. The result so far is encouraging. His tolerance for exercise has definitely increased. Four and one-half months after operation he returned to work and he has been working every day for two weeks without pain or discomfort."

The last two patients were operated upon only within the past month, and it is too early to make a statement concerning them.

The operation in the human patients consists of grafting a part of the pectoral muscle upon the myocardium. The insertion of the left pectoral muscle was cut in the first patient to mobilize the muscle. In the next operations a large pedicle graft, with the pedicle attached along the sternum and vascularized by the internal mammary artery, was taken from the inferior portion of both right and left pectoralis major muscles. The next step in the development of the operation was to use only a unilateral approach and pedicle grafts from the left pectoral muscle, (figs. 10, 11, and 12.) One graft is placed beneath the sternum in contact with the right ventricle. The other pedicle is placed around the left ventricle to the posterior aspect of the heart. The lining of the parietal pericardium is roughened everywhere so that it becomes adherent to the myocardium. It is left open anteriorly so that mediastinal fat and triangularis sterni muscle are in contact with the heart.

CONCLUSIONS

Experimentally the heart can be given a collateral vascular bed by operation. After the heart has been given a collateral vascular bed, both coronary arteries can be ligated with recovery and without the development of infarcts. The vascular bed exerts a prophylactic effect in that it enables the heart to tolerate sudden occlusion of an artery. The vascular bed can play an important role in distributing blood to those parts of the myocardium where the circulation is deficient. A collateral vascular bed has been given to several human patients suffering from sclerosis of the coronary arteries. A statement cannot be made at the present time concerning the value of this operation. Additional experience will be necessary before an appraisal of the operation can be made, but the work is presented here because it is a new attack upon a serious disease. Its primary purpose is to preserve the heart beat by giving the heart more blood. Secondarily it reduces cardiac pain. The method promises more than treatment of a symptom; it strikes at the disease.

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Fractures of the Patella

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Prior to the advent of the automobile, fractures of the patella were much less common than they are today. With a violent head-on collision, the flexed knee strikes the instrument board; the patella receives the force of the blow and quite frequently is fractured. This is a common etiology of many fractures of the patella. With this increase in number there has been a simultaneous improvement in the methods of treatment; thus one may now anticipate a higher percentage of excellent functional results.

The fractures may be classified for discussion as follows: (1) incomplete transverse, (2) complete transverse, (3) incomplete longitudinal, (4) complete longitudinal, (5) compound, (6) ununited.

Incomplete transverse fractures and incomplete longitudinal fractures are simple problems, requiring only a short period of immobilization followed by gradual restoration of active motion. The end results, unless complicated by injury to the interior of the joint, should be excellent in all cases.

Longitudinal fractures, according to Lapidus, are more common than is generally recognized. Complete longitudinal fractures with separation of the fragments are less common than the incomplete variety. I have seen only one case which occurred in a young boy aged ten years, who was at the time under treatment for progressive polyarticular arthritis. He was standing on the front end of a street car which collided with an automobile throwing him upon his right knee. Examination revealed a wide longitudinal separation through the center of the patella with about one inch separation of the fragments, just as if a split patella incision had been made, though there was no injury to the skin. Reduction was easily accomplished by lateral pressure with the aid of towel clips which were immediately removed and a cast applied. Recovery was uneventful.

During the past twenty-four years my associates and I have treated fractures of the patella by various methods in 164 cases. Of this number there were 115 males, and 49 females; 153 were adults, 2 were children aged 10 and 11, and one was an adolescent aged 14. Eight others were between the ages of 14 and 20.

Fractures of the patella rarely occur under the age of 16 years and are more frequent between the ages of 25 and 45, the average age being 38. In the aged the same force that causes fractures of the patella will more frequently produce a rupture of the quadriceps tendon. Our oldest fracture of the patella was 71 years. The rarity of fracture of the patella in children is possibly due to the difference in osseous structure of bone in childhood, as children more frequently injure the knee by falls than adults.

There were 96 complete transverse fractures; 84 were fresh and 12 ununited. These fractures may be due either to a direct blow or indirect violence, and are a more complex problem than the other types, as the contracture of the quadriceps causes wide separation which makes approximation by manual reduction impossible. The line of fracture in all was more or less serrated and in most instances oblique from without, inward and downward. The separation of the fragments depends upon the degree of contraction of the muscles comprising the quadriceps tendon. The upper fragment was also frequently turned forward so that the fractured surface faced downward and forward: in other words buckled anteriorly.

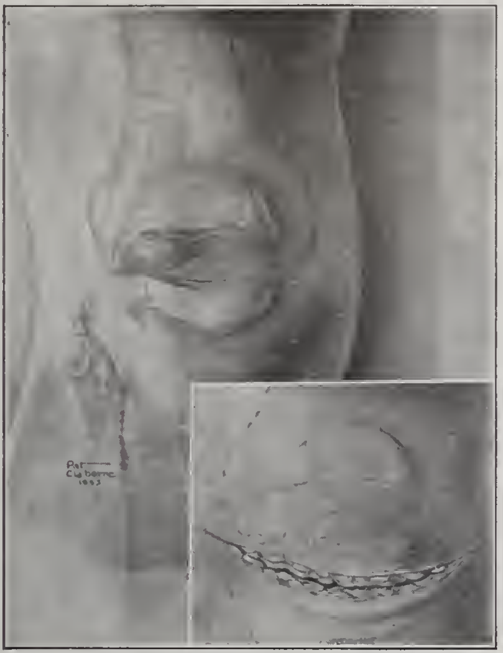

Fig. I. Transverse fracture of the patella and transverse incision.

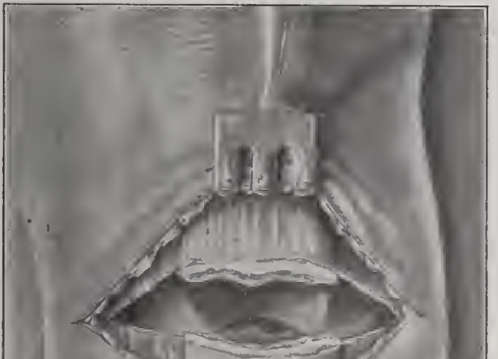

Fig. II. Surface of the patella denuded.

The almost universal consensus of opinion is that the complete transverse fracture should be treated by open operation, with some method of internal fixation. Ninety-six cases have required open operation by the following methods:

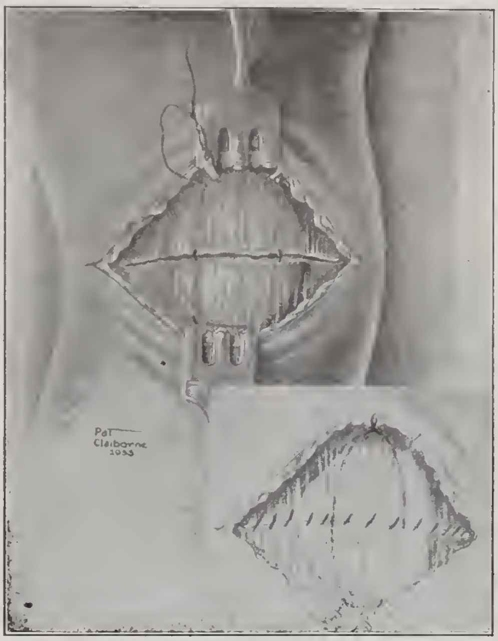

Fig. III. Anterior wire-loop inserted.

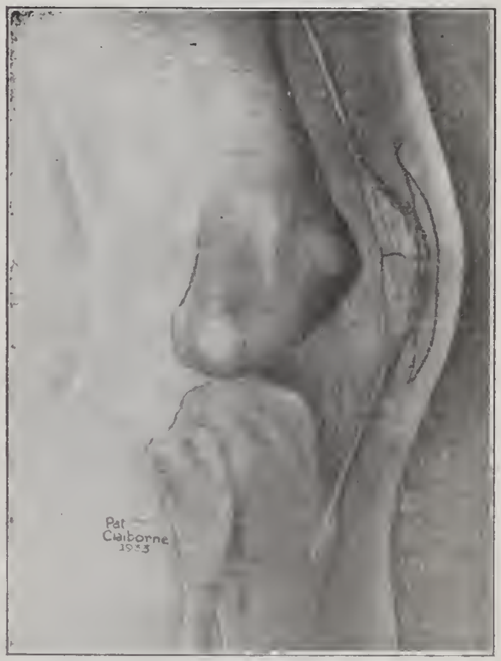

Fig. IV. Lateral view after insertion of anterior wire-loop.

1. Drilling of the fragments and suture with kangaroo tendon, 10 cases.

above or below, perfect fixation is lost as the wires may cut the tendon when under tension and permit separation of the fragments. The

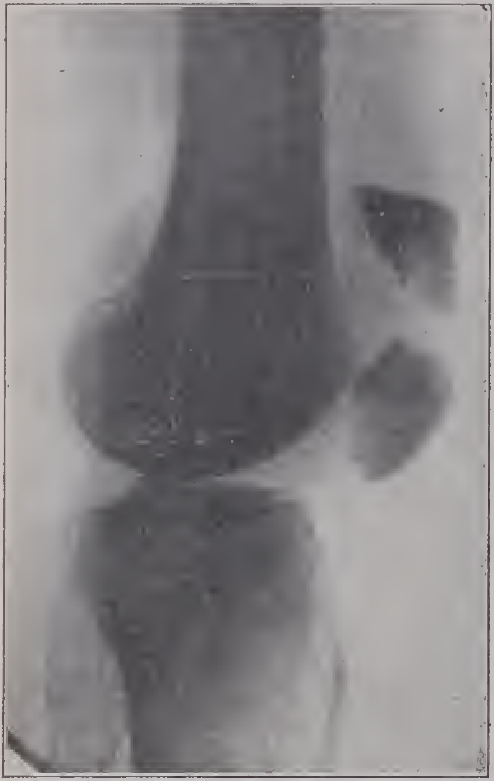

Fig. V. Transverse fracture of the patella.

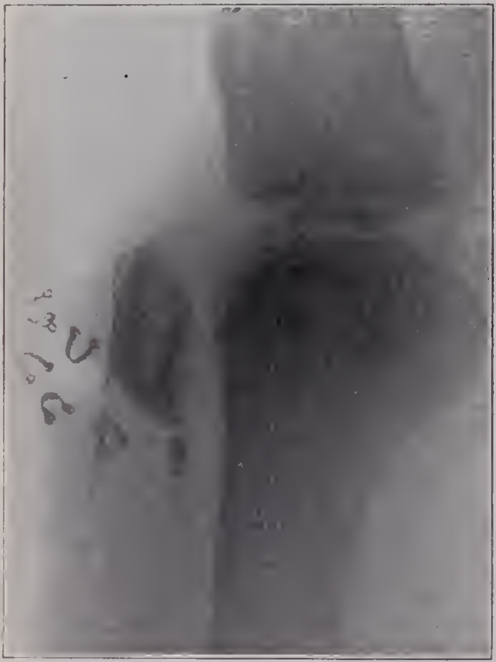

Fig. VI. X-ray made on operating table immediately after reduction—Steel clips for holding stockinette to skin margins still in place.

2. Suture tendinous fibers and capsule with kangaroo tendon or chromic catgut, 19 cases.
3. Drilling of fragments and suture with wire, 7 cases.
4. Rustless steel wire loop about the entire patella, 9 cases.
5. Anterior wire loop, 51 cases.

The first four methods are well known and require no description. The last method was described by the late Denegre Martin* of New Orleans and consists of a curved transverse incision with convexity upward, exposing the area of the fracture. A 0.5 mm rustless steel wire is threaded upon a large Gallie needle and passed through the quadriceps tendon just above and in close proximity to the upper extremity of the patella on the inner portion of the anterior aspect of the tendon then downward over the anterior surface of the patella about junction of inner and middle two-thirds of both fragments of the patella but beneath the tendinous fibers until the patellar tendon is reached; then the needle with wire is placed transversely through the

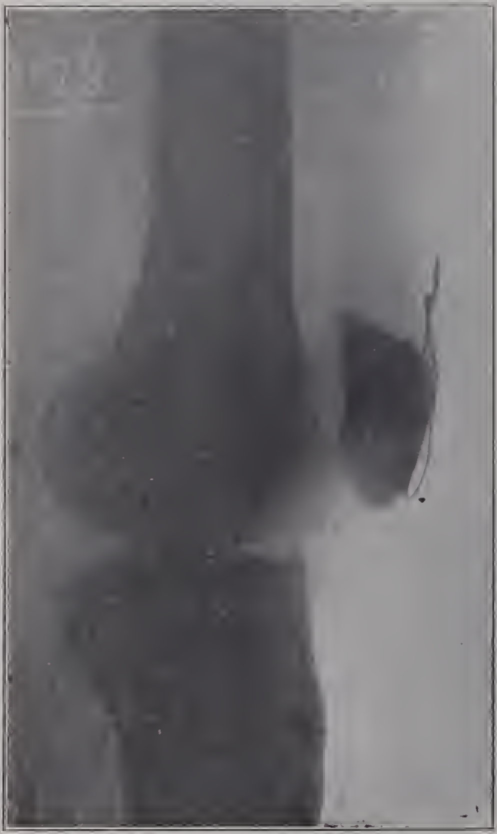

Fig. VII. Six months later.

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*Martin, E. Denegre: Results of work done on fracture of patella for past twenty-six years, with conclusions. New Orleans Med. & Surg. Jour. 84:846, 1931.

patellar tendon in close proximity to the lower extremity then upward over the lateral aspect of the anterior surface of the patella until the quadriceps tendon is reached. Both ends are then drawn tight, usually, accurately approximating the fragments. The wires are then twisted together, severed, and depressed into the quadriceps tendon. The forward tilting of the upper fragments is thus corrected and the fragments forced into line. The sutures must be placed close to the patella above and below, for it has been found that if they are placed at any distance in the tendon either wire loop is usually placed slightly oblique as the fracture line is often downward and inward. A roentgenogram is then made which should demonstrate perfect approximation, and in some instances the fracture may be recognized with great difficulty. If the lateral and medial portion of the capsule is excessively lacerated, a transverse skin incision should be made and these structures sutured with catgut. Otherwise a curved longitudinal incision is sufficient. This procedure results in a simple pursestring suture over the anterior aspect of the patella with minimum trauma which gives sufficient immobilization to permit early mobilization.

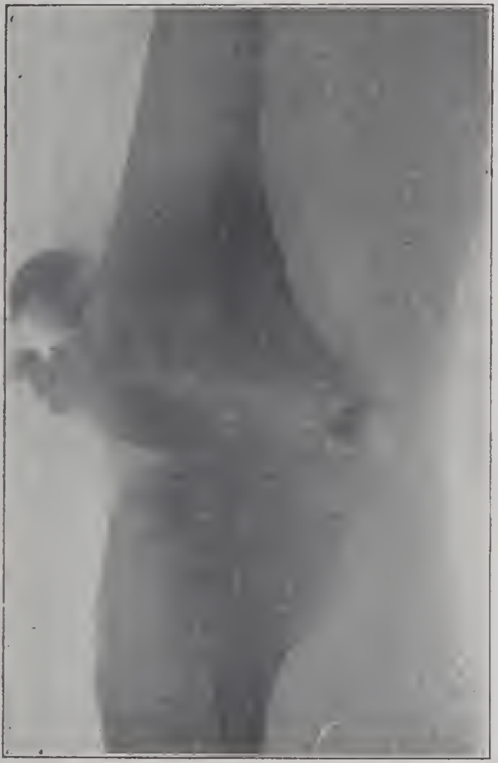

Fig. VIII. Comminuted transverse fracture of the patella.

In closed reduction the procedure may be employed immediately unless there is extensive trauma of the skin and soft parts. The method is also adaptable to compound fractures as efficient drainage and active motion is permitted unless trauma to the soft tissues is excessive or the wound obviously infected.

After the elapse of ten days or when the wound has healed active motion is instituted and gradually increased until at the end of sixty days there should be complete voluntary flexion and extension to 90 degrees and in some instances practically normal motion. Much depends on the age of the patient and incident complications as internal injuries to the joint and adjacent fractures.

The records of all cases treated have been reviewed and analyzed as to functional end results and anatomical approximation. An accurate estimate could not be made in all cases as many did not return for observation, but we do know that in those in which complete fixation was employed for a period of six weeks which was the custom ten or more years ago, that a much longer period of disability resulted and that many cases did not have a return of normal function. However, no uncomplicated cases can be recalled in which eventually 90 degrees of flexion was not finally secured and in a high percentage, normal motion. In only two cases which we have treated has there been a failure of union and these were due to unusual complications.

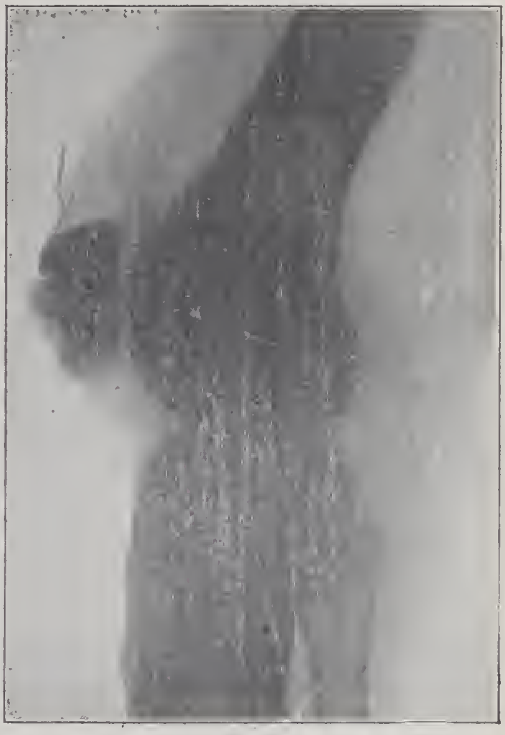

Fig. IX. Same as Fig. VIII after reduction.

In fractures in the vicinity of joints it is an undisputed fact that as complete anatomical restoration as possible is essential. The better the anatomical result, the better the functional result. Perfect reduction was secured by all methods in some cases but by far the larger percentage was obtained by those in which internal fixation was secured by wire, the anterior loop giving the largest and the circular loop about the patella the second best results. Of the 51 cases treated by the anterior loop there were 39 in which the anatomical reduction was most satisfactory. Even in those that were classified as slightly irregular the results were superior to the majority treated by the other methods.

The disadvantage of the anterior wire loop is that a foreign material is employed which may later require removal. This is usually accomplished with local anesthesia and has been necessary in nine cases. The advantage of this method is the early motion that can be permitted, the better anatomical restoration, and the decrease of time of disability. As previously stated excellent results have been obtained by all five methods but I am certain that the percentage of excellent functional end results has been materially increased by the anterior wire loop method of Denegre Martin.

The Diagnosis and Management of Acute Circulatory Failure

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Acute circulatory failure, although a common clinical entity, is still often mistaken for cardiac failure and treated as such. It is encountered in every field of medical practice, and is of interest alike to the surgeon, the internist and the specialist. The various names which have been applied to this syndrome have added to the confusion and have tended to direct attention away from the real problem involved. Medical literature is replete with such terms as "surgical shock," "traumatic shock" and "hemorrhagic shock." D. W. Atchley has recently suggested the term "medical shock" to connote a comparable condition encountered not infrequently in non-surgical conditions such as the acute infections, certain poisons and diabetic acidosis.

The primary object of this paper is not to discuss any of the several theories of shock which have been proposed nor to suggest a new one, but to emphasize the importance of recognizing the true nature of this circulatory phenomena whether it occurs as a post-operative complication, or in the course of an acute infection, or as a terminal event in some chronic disease. A prompt recognition, as well as a correct interpretation, of this common clinical picture is of the utmost importance. While surgeons as a group are usually more alert to this condition than non-surgeons, both all too often adhere to the traditional concept that all circulatory failure means heart failure.

Appropriate therapy must of necessity be predicated on a clear understanding of the disturbed physiologic processes. We as clinicians are very slow to make practical use of information gained in the physiological laboratory. Now that we are beginning to appreciate more and more the inportance of functional disorders in clinical work we would do well to consult the physiologist more and there would be less need for the pathologist.

SYMPTOMS

Regardless of whether the circulatory failure follows a surgical operation, an injury, a poisoning or an acute infection the symptoms are essentially the same. Weakness and profound exhaustion are always prominent features. In the early stage the patient is usually restless and apprehensive, later becoming apathetic and indifferent to his surroundings, finally lapsing into unconsciousness if appropriate treatment is not instituted promptly. He is often surprisingly insensitive to pain. The lips and finger nails are bluish. The pupils are dilated. The tongue and mouth are dry. Respiration is usually accellerated and shallow, but there is no dyspnea nor orthopnea. The pulse is rapid, weak, and, as the condition progresses becomes imperceptible. The blood pressure is always low, both arterial and venous, and is often difficult to estimate accurately. The superficial veins are empty and collapsed making intravenous therapy difficult. The heart sounds are weak and of a tic-tac quality but the rhythm usually remains normal. The temperature depends on the primary condition: except in the presence of an acute infection it is usually subnormal. Not infrequently even in the presence of an acute virulent infection the temperature may remain subnormal. Those of us who passed thru the pandemic of influenza in 1918 saw many such cases.

These symptoms are almost invariably accompanied by a relative increase in the number of red blood cells and hemoglobin. If checked from hour to hour the concentration of the blood becomes a valuable diagnostic aid. A leucocyte count is routine in almost all acute conditions but the red cells are counted only when anemia is suspected. This test for hemoconcentration, that is, an hourly red cell count and hemoglobin estimation, is very helpful in differentiating between post-operative hemorrhage and shock. In the presence of the symptoms just enumerated if the blood counts show the red cells increasing the diagnosis of shock is practically established. On the contrary a decrease in red cells and hemoglobin points to hemorrhage.

T. C. Janeway was among the first clearly to distinguish between peripheral circulatory failure and cardiac failure as a complication and often a terminal event in severe infections. In an article published in 1907 entitled "Some Common Misconceptions in the Pathologic Physiology of the Circulation and Their Practical Significance" he said, "We must in most cases abandon the idea of cardiac death at the height of acute infectious diseases such as pneumonia, typhoid fever, or septic fever,— In the place of heart failure we must write vasomotor failure."

Experience in the world war stimulated renewed interest in the disturbances of physiology responsible for the shock syndrome. As a result of an enormous amount of painstaking research both in America and in Europe it is now generally agreed that the type of circulatory failure often observed in such acute infections as influenza, pneumonia, puerperal septicemia, typhoid and malaria fever, dysentery, and entero-colitis is identical with that of surgical or traumatic shock.

The same type of circulatory failure is not uncommon as a terminal event in chronic diseases, as in the following case. Miss R. L., an elderly maiden lady, was first seen in 1928 on account of a moderate arterial hypertension. She was not seen again till April of this year. Her only complaints were lack of endurance and nocturnal dyspnea. Physical examination showed nothing of importance except that her blood pressure was 185 over 110 and a slight amount of pretibial edema, which she claimed always disappeared at night. Three days later I was called to see her and found all the symptoms of an acute cold and a temperature of 102 degrees. Her blood pressure was now 150 over 100 but her heart tone and rhythm were normal. Within twelve hours her blood pressure had dropped to 90 over 60, her skin was cold and clammy, temperature 98, lips and finger nails bluish, pulse weak and thready, heart rate 140, and sounds very weak. Respiration was feeble and shallow. In spite of intravenous therapy, the use of the oxygen tent, and stimulation she grew progressively weaker. Finally she vomited a large amount of dark fluid resembling coffee and within an hour had expired. Although she exhibited signs of beginning congestive heart failure at the onset, the immediate cause of death was acute peripheral failure probably superinduced by the terminal infection.

The shock syndrome which often accompanies severe burns is also indistinguishable from that of traumatic or surgical shock. The post-mortem findings according to Pack are in many respects identical with those of other forms of shock. For example, in the gastrointestinal tract that he found "a generalized hyperemia of the mucous membranes with punctate petechial hemorrhages into the mucous membranes of the stomach and intestines. He also found that the serous cavities especially the pleura and peritoneum contained serous exudates which occasionally is hemorrhagic." He also noted marked hemoconcentration.

Many of the same clinical and pathological findings have been noted in acute hemorrhagic pancreatitis and in high intestinal obstruction. Even in some cases of acute coronary occlusion the peripheral circulatory failure may constitute as much of a therapeutic problem as the coronary infarction. The shock syndrome may so over-shadow the cardiac symptoms as to add to the diagnostic difficulties as in the following case: Thirty-six hours after he had a severe attack of epigastric pain which required one-half grain of morphine for relief, I was called in consultation to see R. W. B., age 65. Soon after the attack his abdomen had become greatly distended and in spite of large doses of purgative the bowels had not moved, and he had voided only eight ounces of urine since the onset. The failure to obtain a bowel movement had aroused a suspicion of a possible intestinal obstruction, although there had been no vomiting. On examination the patient appeared to be extremely weak. The skin was cold and clammy. There was marked gaseous distension of the abdomen, but no tenderness and on auscultation it was absolutely silent. The temperature was 97F. and the pulse too weak to count. On trying to get the blood pressure a few beats could be heard between 70 and 80 only. The heart rate was 140, and regular. In the region of the apex a distinct pericardial friction rub was heard. This in the light of the history made the diagnosis of coronary occlusion practically a certainty. The distended silent abdomen was merely a part of the shock syndrome. Before he could be moved to the hospital he suddenly expired.

PATHOLOGIC PHYSIOLOGY

The immediate cause of the disturbed physiologic processes responsible for this symptom complex has been a subject of much speculation and investigation. Time will not permit a review, nor shall I attempt even to enumerate the various theories which have been offerred. Suffice to say that evidence has been accumulating which tends to discredit the theory which held that the chief cause of these symptoms of circulatory failure was a splanchnic dilatation permitting the patient to bleed, as it were, into his own vessels. That such dilatation does take place has been shown repeatedly at autopsy. Regardless of the cause of the shock extreme congestion of the viscera, frequent submucous hemorrhages with varying amounts of sanguinous fluid in the serous cavities are common post-mortem findings even in those cases which succumb in a few hours. However, this stagnation of blood in the viscera accounts only in part for the loss of circulating fluid. While the exact physiochemical mechanism is still controversial the evidence seems conclusive that the greater part of this loss results from an escape of fluids into the tissues outside the vascular system. Moon has formulated this fundamental concept as follows: "The shock syndrome results from a disparity between the volume of the blood and the volume capacity of the vascular system."

The cause of the increased permeability of the capillaries remains unexplained. Yet the majority of investigators are agreed that this change in the capillary walls with the escape of plasma into the tissues constitutes the chief mechanism of shock. This escape of fluids from the vascular system into the tissues together with the stagnation of blood in the viscera decreases the volume of circulating fluid. In consequence there is a lowered venous pressure and a decreased venous return to the heart. As the venous return flow is diminished there is incomplete diastolic filling of the heart. For a while this incomplete filling is compensated for by an increased heart rate, which maintains the minute output. This phenomenon is observed in the beginning of all acute infections. But as the disease advances the vascular bed increases and more and more fluid escapes through the capillary walls into the tissues. From hour to hour less blood gets back to the heart and eventually the minute output begins to fall. This is evidenced by a rising pulse rate and a falling blood pressure and with these the first heart sound grows progressively weaker. Such a heart instead of dilating actually becomes smaller, for a time. Eventually the increasing heart rate with a corresponding decreasd output per beat results in an impaired coronary circulation. Thus the heart is unable to obtain the needed glucose and oxygen. But it has been shown that it is impossible to reduce the cardiac glycogen as long as there is an adequate supply of ogygen. Physiologists have also shown that the oxygen consumption of the heart is determined by the diastolic volume. Therefore, if there is incomplete diastolic filling the oxygen consumption is diminished. The vicious circle thus produced results in anoxemia and finally myocardial failure is added to the peripheral failure.

In order to interpret correctly these secondary symptoms and treat them intelligently it will be necessary to digress at this point and review briefly some of the facts concerning muscle physiology and their relation to circulatory failure.

Briefly stated the prerequisites to muscular contraction are phosphocreatin or "phosphagen" and glycogen. During contraction the phosphagen is hydrolized into creatin and phosphates. These are resynthesized during rest. At the same time glycogen, in the presence of insulin and oxygen, is broken down into lactic acid. Lactic acid appears to be necessary for a resynthesis of the phosphagen. Part of the lactic acid is carried to the liver where it is reformed into glycogen, the remainder being oxidized into carbon dioxide and water.

The glycogen content of cardiac muscle is normally higher than in skeletal muscle. If an individual is kept on less than a maintenance diet for a long time the ekeletal muscles must be depleted of their glycogen but it will remain unchanged in the heart muscle. For proper utilization of this glycogen there must be an adequate supply of both insulin and oxygen. Moreover it has been shown that if there is an ample supply of both oxygen and insulin the utilization of glycogen is increased when there is a high blood sugar concentration. Thus we have ample experimental evidence to support the intravenous use of hypertonic glucose solutions in combination with insulin and oxygen in the management of acute circulatory failure.

TREATMENT

The first indication in the management of any case of acute circulatory failure is to remove all those conditions which tend to accentuate the shock, such as pain, fear and cold. For the relief of pain as well as the apprehension there is no remedy that will take the place of an opiate. To control the sweating which is often profuse it is best to combine atropine in full dosage with the opiate. To relieve the cold the patient should be kept between warm blankets with hot water bottles or electric heating pads. In applying external heat care should be taken not to accentuate the fluid loss by increasing the sweating.

Since it has been shown that the immediate cause of the shock syndrome or circulatory failure is a discrepancy between the volume of circulating fluid and the volume capacity of the vascular system the next indication is to restore blood volume.

As our armamentarium for this purpose we have, in the order of their importance,

(1) Intravenous therapy.
(2) Mechanical and postural remedies.
(3) A few drugs.

INTRAVENOUS THERAPY

In all cases of shock regardless of the underlying cause the peripheral circulation is so impaired that subcutaneous therapy is of little or no value because of the poor absorption. This applies to drugs as well as fluids. Intravenous therapy must be relied on even if it requires exposure of the vein. The continuous venoclysis introduced by Matas many years ago is very appropriate in such cases.

In the milder cases physiological saline solutions if employed in adequate quantities will suffice. If the blood chlorides are much reduced it is better to employ hypertonic solutions. But since the chlorides rapidly escape thru the permeable capillaries care must be taken that the accumulated salts do not tend to interfere with reabsorption of the fluids. Although Gale and Weddell found that the blood sugar in post-operative cases is usually elevated, clinical experience indicates that hypertonic solution of glucose in normal saline are more effective than the saline solutions alone. As an emergency measure it is advisable to give 50 c.c. of a 60 per cent solution of glucose. This aids in the withdrawal of fluids from the tissues.

Perhaps the most frequent cause of our therapeutic failures is the insufficient amount of fluids lost by sweating, vomiting and diarrhoea to the normal loss of 2000 to 3000 c.c. in twenty-four hours it will be seen that an injection of 1000 c.c. every six to eight hours, as usually prescribed, is altogether inadequate. Twice this amount or more may be needed in some cases. There is no ground for the fear that large quantities of fluids will overtax the heart. Nor is there much danger of introducing the fluid too rapidly. When allowed to flow at the rate of 30 c.c. per minute, or 1800 c.c. per hour we add only one fourth of a c.c. for each heart beat when the rate is only 120 and it is usually higher. At this rate the diastolic filling is aided very little. The glucose solutions should be combined with insulin to obtain the maximum benefit.

There is no treatment that equals in value a large blood transfusion. When a suitable donor is not available and the glucose and saline solutions have failed to raise or sustain the blood pressure 500 c.c. of 6 per cent solution of acacia has been used with gratifiying results.

MECHANICAL MEASURES

The mechanical measures which have been found to be effective are the elevation of the foot of the bed, the application of tightly fitting elastic bandages to the legs and thighs, and a snugly fitting abdominal binder. It is sometimes surprising to see how quickly the pressure is elevated from these measures alone.

DRUGS

We have already emphasized the importance of opiates. In some cases the barbiturates are preferable. The so-called heart stimulants, if there be any, are of doubtful value. Digitalis which is usually the first drug thought of has no place in the management of acute circulatory failure. While it is invaluable in congestive heart failure we have tried to show that in the shock syndrome it is not the heart that fails, except as a terminal event, but that the failure is at the periphery. Digitalis not only does not aid but may do harm.

Caffeine, metrazol and coramine which are the drugs most often used are of doubtful value. We have seen no benefit from the use of strychnine, although Warfield regards it as the one drug par excellence in such cases. He uses it in doses of 1/20 to 1/15 of a grain every two to three hours.

The only drugs of proven value in raising blood pressure are ephinephrine and ephedrine. To be effective these must be given intravenously. We have seen one drop of adrenalin given intravenously raise the blood pressure 100 m.m. in three minutes; but unless repeated or supported by some other measure the pressure will return to the original level within less than 30 minutes. Ephedrine sulfate may be used in doses of 1/20 to 1/10 of a grain and the effect is more lasting.

Warfield and others have obtained good results from pitressin. In our hands the results have been disappointing.

Oxygen therapy is indispensable in all cases where there is cyanosis. This applies to practically all cases of acute circulatory failure. Because of its convenience and simplicity we prefer the Burgess-Collins tent. The nasal catheter will yield good results but the oxygen should always be passed thru cold water to prevent the drying of the nose and pharynx.

SUMMARY

1. Acute circulatory failure is a common clinical entity which is often mistaken for cardiac failure and treated as such.
2. Whether it occurs in connection with a sur-

gical or a non-surgical condition the immediate cause of the circulatory failure is a discrepency between the volume of circulating fluid and the volume capacity of the vascular system. Consequently the fundamental principles in the treatment are essentially the same for all cases.

3. The indications in the treatment are
   (a) Remove the cause when possible.
   (b) Restore the volume of circulating fluids.
   (c) Reduce the capacity of the vascular bed.
4. The volume of circulating fluid is increased by the intravenous infusion of large quantities of hypertonic glucose solutions in physiologic saline and by repeated blood transfusions. These should be combined with insulin.
5. The capacity of the vascular bed may be reduced to some extent at least by bandages applied to the extremities and the application of a tight abdominal binder.
6. The most useful drugs are epinephrine and ephedrine, pitressin and possibly strychnine. Caffeine, coramine and metrazol are of very doubtful value. Digitalis is distinctly contraindicated.

Yellow Fever In Mississippi 1878-1905

HARRIS ALLEN GANT, M.D.
Columbia, Tenn.

Chapter IV

1898—ORRWOOD

Returning from Havana to Water Valley, my home town, I was met by my friends with considerable enthusiasm, and interest in my trip. They called a meeting of the citizens and had me relate some of my experiences and impressions of the conditions preceding the outbreak of the war. They presented me with a small silver service as a testimonial of their appreciation, and this I have always valued most highly, coming from my home people, and being the second time I had been so honored by them, for they had given me a similar expression of appreciation just twenty years previous to this date.

This was January and I took up my practice again, but in May, the State Board of Health, fearing another introduction of yellow fever, with a late diagnosis and announcement of the same, as occurred the previous year at Ocean Springs, determined to appoint experienced men as sanitary inspectors, and H. H. Haralson was stationed at Mobile, S. R. Dunn at New Orleans, H. M. Folkes at Biloxi, and I was used as a general state sanitary inspector. It was my duty, not only to investigate suspicious cases of fever, but to look after smallpox, typhoid fever, scarlet fever, diphtheria, and other infectious or contagious diseases, and to visit towns reported to be in unsanitary conditions and recommend the abatement of nuisances. I was kept very busy looking after smallpox, of which there was a widespread epidemic in Mississippi, until June 12, when I was sent to Eucutta, a small town in Wayne County, to look over a suspicious case of fever, which I found to be yellow fever in the person of Professor J. M. McNeill, who had come into that community from McHenry, where Dr. Haralson had found yellow fever on June 9. This was the first case that occurred in the State during the year 1898. Dr. Haralson had made the diagnosis at McHenry, and had taken charge of that place for the State Board of Health. There were in all 25 cases of fever, at McHenry, including one case four miles in the country, and no deaths. The diagnosis had been confirmed by Surgeon H. R. Carter, of the M. S. S., and Dr. Joe Waldauer of Vicksburg. At the suggestion of Dr. Carter, a house to house inspection was made twice daily, he furnishing one man to assist in the work. Dr. Haralson has a detailed statement in his report to the State Board of Health of the cases, probable origin, work done, and results. It had been a question whether yellow fever, after being introduced into a town, or community, could be stamped out. The work at McHenry proved that it could be done, for the first cases were found there on the 20th of May, and the last occurred on the 28th of June. The stamping-out process was successful at a number of other towns this year in the State, notably, Eucutta, Centerville, and Benoit.

ORRWOOD

The hamlet or community of Orrwood, is of such importance in the history of yellow fever that it deserves to be definitely located. It is in the western angle of an almost equilateral triangle, whose sides are approximately nine miles in length. Beginning at Water Valley, my own town, on the Illinois Central Railroad, twenty-nine miles north of Grenada and eighteen miles south of Oxford, we run north nine miles to Taylor, the northeast angle of the triangle. Thence west to Orrwood. Thence southeast to Water Valley, in the northern part of Yalobusha County. Taylor is in the southern part of Lafayette County, Orrwood is in the southwestern corner of Lafayette County.

I was called upon to visit several places during July and August to decide upon suspicious cases, but there were no other cases of yellow fever found in the State until August 29, when I was called from my home in Water Valley to see some cases of sickness in the family of Mrs. Charles Gray at Orrwood. I had no intimation that I was being called to decide whether the sickness was or was not yellow fever. Dr. W. T. Mathews of Water Valley, upon my invitation, went with me. Dr. Whitson of Water Valley had seen these cases a day or two previously, but was then sick and unable to go, and, therefore, I happened to be called. Upon examination, very much to my surprise I found four cases of yellow fever. This was all the more surprising because of the distance of Orrwood from the railroad, and because of the fact that no yellow fever had been reported north of McHenry in Mississippi. The puzzling question with me was how these people could be having yellow fever in that healthful, hilly, country neighborhood, so I hesitated to announce the fact. It was late in the evening, and, after giving instructions as to the management of the sick, I told the family not to permit any visiting by the neighbors, and that I would return early on the following day and make a positive diagnosis. Dr. Mathews and I, the next day, visited sickness of a similar character in several families in that neighborhood. I learned that Dr. A. S. Gray, son of Mrs. Charles Gray, had died at his home in Taylor on the 9th of August, having been attended by Dr. Whitson of Water Valley, and upon inquiry I was told that he had symptoms suspicious in my mind of yellow fever. So, then, I unhesitatingly pronounced the cases in the Gray house yellow fever, and so wired Dr. J. F. Hunter, the executive officer of the State Board of Health at Jackson. Upon my return that night, August 30, to Water Valley, there was a camp meeting in progress about halfway between Orrwood and Water Valley, and in passing, the preacher in charge of the meeting, having heard of my being out at Orrwood, asked my opinion as to the character of the sickness, and I frankly told him it was yellow fever. He asked if I did not think it best to break up the meeting. I told him I did, knowing it would break up itself. In fact, by the time I reached Water Valley, people from the camp grounds were coming in in all sorts of vehicles in a great state of excitement.

There was an understanding and agreement between the southern states that, if yellow fever should be announced in any town, city, or community, it should be immediately reported by the State Board of Health to all other states. Upon wiring my diagnosis to Dr. Hunter, he announced yellow fever at Orrwood, and immediately quarantine was established by the adjacent states, a thing that had not been done before in the history of yellow fever, because usually before quarantine was put on, experts from other states would go to the place and pass judgment upon the diagnosis, but, in this instance, the railroads were tied up in several of the southern states upon my statement alone.

I went from Orrwood to Taylor before returning to Water Valley on August 30, and investigated the sickness there and came to the positive conclusion that Dr. Gray had died of yellow fever. I found that members of his family at Orrwood had visited his house during his illness, and that friends and neighbors generally had been in to see him. So I felt confident that that was the source of infection of the Gray family at Orrwood. And, now, the question came up as to the origin of the yellow fever at Taylor. On September 1, Drs. Dunn and Haralson of the State Board of Health, and Dr. Gill of the State Board of Health of Louisiana, arrived at Orrwood and went with me to see all the sick, and fully concurred in the diagnosis of yellow fever. On the same day, we visited Taylor and confirmed the diagnosis at that place. On September 4, Dr. Carter of the M. H. S. reached Orrwood, and with Dr. Haralson we visited a number of the sick, and he satisfied himself as to the correctness of the diagnosis, already made.

Dr. Carter seemed to be much impressed by the peculiar characteristics of the outbreak of yellow fever, and of the favorable conditions for the study of the disease, at Orrwood especially. He said to me, "Gant, you have the best opportunity for the study of yellow fever here that I have ever known in my thirteen years of fooling with it." He had talked to me about what he called 'house infection' and, for some years, had been trying to establish positively the time at which other people in the house would be taken sick after the introduction of the first case in that house. He had told me of what great difficulty he had met in getting correct, truthful statements from people in towns where commercial interests were involved, and, therefore, he could not obtain satisfactory data. But here he said, "You have a community remote from the railroad, not fearing or dreading interruption of any commercial interest, a community of intelligent, truthful, law-abiding citizens, who have confidence in you, and who will do what you request them to do; so I am asking you to keep a record of the time of the taking down with yellow fever of the first case in any home and the interval elapsing until the taking down of the next case, and so on, in regard to all the members of the family. Let the time be carefully noted as to the hours and when possible the minutes." I readily agreed to this request and asked Dr. W. T. Mathews to do this work, as I could not be all the time at Orrwood, for my duties as State Inspector required me to go at any time to any place in the State, whenever suspicious cases should be announced. However, I was in and out of Orrwood, Taylor, and Water Valley all of my spare time. I gave Dr. Mathews full instructions about keeping his records, and he did it excellently well, as well as could have been done during the epidemic, for people are very much excited and many times fail to remember exactly when first cases occur in the house. After the epidemic, and after studying these data, I turned Dr. Mathews' report over to Dr. Carter, and after correlating the data in connection with those he had collected at other places, he arrived at a satisfactory conclusion as to what he had previously called 'house infection,' but now is called the 'extrinsic incubation period' of yellow fever, namely from twelve to twenty days. He states in a personal letter to me, the original of which I still have, that the data furnished by me was the essential basis of the discovery of the transmission of yellow fever by the mosquito. This is the missing link, for lack of which the Army Commission in Havana in 1900, consisting of Dr. Reed, Chairman, and Drs. Carroll, Agramonte, and Lazear, were unable to convict the mosquito, until informed by Dr. Carter that the mosquito must be allowed an incubation period from twelve to twenty days. When this was done, non-immune persons bitten by the mosquito that had been given from twelve to twenty days in which to become infected, invariably had yellow fever. This new knowledge of yellow fever, established by Carter, the 'extrinsic incubation period' of the disease, as figured out by him, from the data furnished by me, and secured mostly by Dr. W. T. Mathews, during this epidemic at Orrwood, is of such stupendous importance that I feel the time, place, circumstance, and individuals concerned should be a part of the record of yellow fever in the United States. Dr. Gorgas had said that "The establishment of the transmission theory of yellow fever by the mosquito was not the work of any one man, but, like most discoveries, there were many threads that led up to the final results. First, Carlos Finlay of Havana, who said as far back as 1881, that he believed the mosquito was instrumental in the conveyance of yellow fever. Then there were Reed, Carter, Sternberg, Guiteras, and others, all working toward the same end."

At the risk of some repetition, I am inserting here my report in full to the Executive Committee of the State Board of Health, of the Orrwood and Taylor outbreak of yellow fever, with the statistics kept, and the management of conditions. The facts stated and the statistics recorded are exact copies of my official report, and can be fully relied upon. This report and data is closely analyzed and explained by Dr. H. R. Carter in an article in the New Orleans Medical and Surgical Journal in May, 1900, a photostat copy of which was sent me by Dr. George H. Ramsey. This article is most instructive and is explanatory of the process by which Carter arrived at the establishment of the 'extrinsic incubation period' of yellow fever. He selected twenty or more houses at Orrwood, and studied each case separately. It is a most valuable contribution to the study of the natural history of yellow fever.

"Water Valley, Miss., Nov. 30, 1898

"To, Dr. J. F. Hunter, Secretary,
State Board of Health,
Jackson, Miss.

ORRWOOD

Dear Sir:

On August 29th, Dr. J. M. Whitson of this place had a note from Mrs. S. Y. T. Knox, Orrwood, asking him to bring me out to see, in consultation with him, several of the Gray family, whom he was at that time attending. The doctor being sick, sent the note to me, and I invited Dr. Mathews to go with me to Orrwood, as he had already been there with Dr. Whitson. Mrs. Knox is a sister of Dr. Gray, who died at Taylor on August 9th. Upon arriving at the Gray house I found four of the family sick with yellow fever, and inferred that it had been brought there from Taylor, since Ed Gray, brother of the doctor who had died at Taylor, and Miss Sallie Wilson Gray and Mrs. Charles Gray, mother of Dr. Gray, had all been exposed to the house in Taylor, in which Dr. Gray sickened and died. There had already been a number of exposures of parties who had been into the Gray house at Orrwood to sit up with the sick, and I heard of several of them having been recently attacked with symptoms similar to those of yellow fever. Orrwood is nine miles northwest of Water Valley, in Lafayette County, Yocona River running from northeast to southwest, about equal distance between the two places. Immediately south of the river, on the public road leading into Water Valley, a large camp meeting was in progress. Upon my first visit, appreciating the gravity of the situation, I hesitated to announce the fever until I could go to Taylor and see whether there were any cases there, which I did the night of the same day, and found two cases with symptoms and history such as to cause me to believe they had yellow fever, and heard of several other cases of sickness of suspicious character in the community.

Early next day, August 30th, Dr. Mathews and I returned to the Gray house, and carefully examined all of the cases again, and from there visited several other sick people in that neighborhood, who had been with the sick at the Gray house.

Becoming fully convinced of the nature of the disease, I returned to Water Valley at night, placing guards on the bridge across the river and advising the minister in charge of the camp meeting to dismiss the meeting, as I passed. I promptly wired you announcing four cases at Orrwood, and suggested that Orrwood and Taylor be quarantined at once, which was immediately done, the trains next morning passing through Taylor without stopping. All bridges crossing Yocona River were well guarded by sunrise next morning. Dr. L. T. Fox was placed in charge of the situation at Water Valley, and instructed to isolate Dr. Whitson's house and take every precaution upon suspicion that his sickness might be yellow fever.

On Thursday, September 1st, Drs. Dunn and Haralson of the State Board of Health, and Dr. Gill of the State Board of Health of Louisiana, arrived at Orrwood, and went with me to see all the sick and fully concurred in the diagnosis of yellow fever. On the same day we visited Taylor and confirmed the diagnosis there. Drs. Dunn and Gill returned to New Orleans, Dr. Haralson remained at Taylor. On September 4th, Dr. Carter, of the M. H. S. reached Orrwood, and with Dr. Haralson and me visited a number of the sick, thus satisfying himself as to the correctness of the diagnosis made. Several parties had left Taylor for other points in the State, and adjacent states, one having gone as far as the Indian territory; one to Memphis, Tenn.; one to Benoit, Miss.; one to near Pontotoc, and one to the neighborhood of Pine Valley, Miss., Holly Springs, and other places. You were promptly notified of these, and health officers were immediately instructed to take charge of the parties in order to prevent any spread of the disease within the State. It is certain that one of these parties had yellow fever, young Johnson at Benoit, who was taken in charge by Dr. Dunn, who managed the situation so as to prevent the spread of the disease in that locality. The health officer at Memphis was notified of the case there, and by prompt action very probably prevented the development of an epidemic in that city, in fact, by prompt notification of all parties who had possibly been exposed at Taylor or Orrwood, it is most probable that several serious outbreaks were prevented at different points in the South. The disease did not spread by reason of any parties leaving the infected localities after it was announced and taken in charge by the State Board of Health.

Dr. W. T. Mathews of Water Valley was placed in charge of Orrwood and vicinity for the State Board of Health. He rapidly became immunized and did good, faithful work, ably assisted by Dr. W. M. Mathis, the local physician, who went to within a few days of the frost before he was attacked by the fever. On September 3rd, Dr. W. T. Mathews sickened at 8 a. m. and as Dr. Mathis could not attend to all the sick, and was expecting to be stricken down at any time, I wired you for another physician, whereupon Dr. J. A. K. Birchett of Vicksburg was sent to the field of action, arriving at Orrwood September 7th. On September 14th, Dr. Mathews had sufficiently recovered to return to work and Dr. Birchett removed his headquarters to Taylor, where he was in charge for the State Board of Health until the close of the epidemic and did valuable and able work. The infected district about Orrwood covered a territory of thirteen and one-half miles, extending eleven miles north, two and one-half miles south, three and one-half miles east, and two miles west of Orrwood. The total population of this district is 387, houses 63. Of this number 30 houses became infected; twenty of these infected by parties who had been to the Gray house, and Taylor and going home subsequently became sick. This accounts for the disease being scattered generally over the neighborhood. In six houses where the fever was carried, no other cases occurred from outdoor exposure. The average period of incubation was four and one-half days; the average time for a house to become infected and for people to begin to sicken in the house after the introduction of the first case was about twenty-one days. At my suggestion Dr. Mathews kept notes of the time of exposure and of the time of taking sick of all the cases, with the exception of a few whose exposure could not be definitely traced; also, the time of taking sick of the other members of the family after the introduction of the first case into the house. I regard these notes of very great value in establishing the period of incubation of the disease in persons and period of secondary or house infection and submit them herewith as a part of this report. There were in Orrwood a total number of cases, 115; 99 whites; 16 colored. Deaths total, 7. Whites, male 3. Female whites, 3. Colored male 1. Total 7.

"DR. MATHEWS' NOTES ON CASES AT ORRWOOD

Gray house at Orrwood, No. 1—Cases.

Sallie Wilson Gray was taken sick August 6th, at 11 p. m. after having been exposed at Dr. Gray's in Taylor on July 29th, to August 2nd, 6 p. m.

Miss Lucille taken August 23rd, 11 a. m.

Pate Gray, August 25th, 2 a. m.

Ed Gray, brought home from Taylor on August 25th, having been sick since August 21.

Mrs. Chas. Gray came home sick August 25th, 10 a. m.

Annie Gray was taken sick August 24th, 11 a. m.

Sam Gray, August 24th, 7 p. m.

Cecil Gray, August 25th, 12 m. Christobel Gray, 7 p.. m

House No. 2.

G. W. McMillan was taken August 29th

Mrs. McMillan and two sons were taken September 13th.

House No. 3.

Pipps Spears sickened August 29th.

Miss Kate Spears September 18th.

Mrs. Spears September 18th.

Miss Bertha Spears Sept. 19th.

Laura Spears Sep. 22nd.

House No. 4.

I. G. Crowell sickened Sept. 2nd.

No other cases in the house.

House No. 5.

J. C. Treloar sickened Aug. 31st.

Dorothy Trelar sickened Sept. 29th after the house was fumigated on Sept. 26th. ?

Ruth Treloar sickened Oct. 2nd.

Jack Treloar Oct. 11th.

House No. 6.

W. E. Simms sickened Aug. 30th.

H. E. Simms Sept. 1ts, 2 a. m.

Mrs. Simms, Sept. 20th.

Reginald Simms and James Simms Sept. 20.

Minnie Simms Sept. 27th.

House No. 7.

Rufus Fisher sickened Sept. 3rd having been exposed at Taylor.

Miss Gertie Fisher sickened Sept. 26th.

Miss Sallie Jones Sept. 30th.

Miss Mollie Fisher Sept. 30th.

Mrs. Fisher Oct. 2nd.

Ruth Fisher Oct. 4th.

Dosia Fisher Oct. 6th.

House No. 8.

Walter Johns, exposed at Ed Spears Sept. 10th, was taken sick Sept. 17th at Rufus Spears' house.

Rufus and Mrs. Spears sickened Oct. 8th.

House No. 9.

Ab Jones exposed at Gray house Aug. 26th sickened August 31st, 1 a. m.

Mrs. Jones sickened Sept. 22nd at 3 a. m.

Edna Jones sickened Sept. 22nd at 4 p. m.

Earl Jones sickened Sept. 22nd at 5 p. m.

Herbert Jones sickened Oct. 5th, 1 p. m.

Leslie Jones sickened Oct. 20th, 3 p. m.

House No. 10.

Mrs. Henry Rogers was exposed and one hour in McMillan's house from 1 to 2 p. m., August 29th, while McMillan had fever. (First day of his illness).

She also kissed Mrs. Williams from Taylor and was with her Saturday, Aug. 27th. No other exposure known. She was taken sick Sept. 4th, at 10 a. m.

Miss Eva Rogers sickened Sept. 20th.

Miss Della Rogers, Sept. 22nd.

House No. 11.

Berry Harrison sickened Sept. 25th. His father spent the evening at Gray place Aug. 27th, and hung clothes he wore home in closet with some feather beds; closet was not opened until a few days before Berry was taken sick.

On the 4th day of September Berry bought some sugar and a pair of shoes at Tatum's store. Store then supposed to be infected.

Mrs. Henry Harrison sickened Oct. 8th.

House No. 12.

J. M. Tatum brought goods from Taylor's depot Aug. 24th and Aug. 29th.

Mrs. Tatum sickened on Sept. 29th.

J M. Tatum sickened Oct. 4th.

Eva Tatum Oct. 13th.

House No. 13.

Dr. Locke exposed to Fisher's house on Sept. 3rd and 10th. Sickened Oct. 1st. Note long period of incubation.

House No. 14.

J. T. Reeves was taken sick Oct. 5th without other known exposure than possibly the following: a shabby house dog went back and forth from Phipp Spears' to Reeves' house, and slept on the chairs, beds, etc., at each place. Phipp Spears went to Reeves' house Sept. 14th and talked with him, but did not go indoors.

Mrs. Reeves also sickened on Oct. 5th.

Clarence Reeves also sickened on Oct. 5th. Alice Reeves Oct. 15th.

Ernest Reeves Oct. 16th.

House No. 15.

N. H. White was exposed Aug. 29th, 3 to 8:30 p. m. at the Gray house. Sickened Sept. 2nd, 1:15 a. m. D. A. White sickened Sept. 22nd, 2 p. m.

House No. 16.

T. J. Ragland exposed at Gray house all night, Aug. 25th. Sickened Aug. 31, 12 m.

Miss Pearl Ragland exposed Aug. 25th in Gray house all night. Sickened Aug. 31, 12 m. Miss Jane Phillips, in the Ragland house sickened Sept. 9, 12 m.

House No. 17.

Dennis Carruthers, colored, continuously exposed in Gray house from Aug. 25th, until he sickened Sept. 10, 2 a. m.

House No. 18.

Langdon Orr, exposed Aug. 13 at Dr. Gray. Spent evening of Aug. 18 at Gray house. Miss Maggie Orr exposed at Gray house, Aug. 24th, and 27th. Sickened Aug. 31. Mr. I. B. Orr exposed at Dr. Gray's night of 8th. Continuously at Dr. Gray's house from Aug. 25th. Sickened Sept. 6th. Miss Carrie Orr exposed at Gray house Aug. 25 and 27th all night. Taken Sept. 7. Harry Orr and James Orr at home sickened 24th and 20th of Sept. Miss Bee Orr sickened Sept. 27th. Mrs. I. B. Orr sickened Oct. 7th. Miss Jessie Orr sickened Oct. 7th. Miss Mary Quay Orr sickened Oct. 7th.

House No. 19.

Miss Blanche Gray was exposed at Dr. Gray's evening Aug. 13th, and at Gray house night. Taken sick Aug. 27th Sept. 18th house was fumigated, subsequently no one was permitted to go in and out except the fumigators who boarded there and went back and forth from Dr. Dan Exdorf's tent, (40 yards) who sickened Sept. 27th J. W. Gray Oct. 8, 1 p. m., M. D. Gray, Oct. 9, 10 a. m., Pat Gray Oct. 16, 8 a. m., Mrs. J. W. Gray, Oct. 14, 2 a. m., Robert Gray, Oct. 18th, 11 a. m.

House No. 20.

Mrs. Dr. Gray sickened on the road from Taylor at 10 a. m., Aug. 25th. All her children Charles, Robert, John Wilkins, and Edward and Albert Sidney, had been sick at Taylor and are reported from that place.

Times at which parties sickened after a single exposure to the disease.

W. N. White exposed at Gray house Aug. 27th from 1 to 6 p. m. sickened Sept. 2nd, 1 a. m.

Miss Pearl Ragland exposed at Gray house, Aug. 25th, 5 p. m. to 8 a. m. sickened at 9 a. m., Aug. 29th.

T. J. Ragland exposed at Gray house from 5 p. m. to 8 a. m., Aug. 25th, sickened at 12 m. Aug. 31st.

George McMillan exposed at Gray house from 2 to 6 p. m. Aug. 25th, sickened at 12 noon, Aug. 29th.

W. E. Simms, exposed at Gray house 7 p. m. to 8 a. m. Aug. 25th, exposed again Aug. 28th, sickened at 3 a. m., Aug. 30th. Mrs. R. G. Crowell exposed at Gray house 10 a. m. to 4 p. m., Aug. 29th sickened 11 a. m., Sept. 2nd. J. C. Treloar exposed at Gray house 7 a. m. to 10 p. m. Aug. 26th, sickened 7 a. m. Aug. 31st.

Mrs. J. C. Treloar exposed at Gray house 10 a. m. to 4 p. m. Aug. 29th sickened 4 p. m. Sept. 1st.

Rufus Fisher exposed at Taylor 8 p. m. to 5 a. m., Aug. 30th, sickened at 2 a. m., Sept. 12th.

Walther Johns exposed at Spears' house 8 p. m. to 7 a. m., Sept. 13th, sickened Sept. 17th, at 4 a. m.

Mack Fisher exposed at Tataum's store from 1 to 3 p. m., Sept. 22nd, sickened at 5 p. m., Sept. 25th.

A. B. Jones exposed at Gray house Aug. 25th at 8 p. m. to 7 a. m., sickened at 1 a. m., Aug. 31st.

Dr. Von Exdorf exposed at Spears' house 7 to 10 p. m., Sept. 23rd, sickened at 10 a. m., Sept. 27th. (Possible exposure several days previously at Orr's and Roger's).

Mrs. J. J. McCarter, never exposed except to a valise of her husband's clothes after he had fever away from home, opened at the house Oct. 13th, 9 a. m., sickened 9 p. m., Oct. 16th.

Roy Cook exposed at Harrison house Oct. 19th, 4 p. m., sickened Oct. 24th, 11 p. m.

H. E. Simms exposed at Gray house Aug. 25th from 7 p. m. to 8 a. m., sickened Sept. 1, 2 a. m.

Times of sickening of several who were continuously exposed.

Phipps Spears first exposed at Taylor, Dr. Gray's, Aug. 4th, then at Gray house at Orrwood from Aug. 25th to Aug. 29th, being attacked at 3 p. m.

Mrs. M. C. Knox came to Gray house 1 a. m., Aug. 28th, sickened at 2 a. m., Aug. 31st.

Dr. W. T. Mathews was in the Gray house with me first on Aug. 29th, went back on Aug. 30th, 10 a. m. and was continuously exposed until he was attacked at 8 a. m., Sept. 3rd.

Pete Dunlap, colored, went to the Gray house to nurse Aug. 25th, was taken sick Sept. 3rd, 2 a. m. Nat Spears constantly exposed from Sept. 25 to Oct. 4th.

Sallie Wilson Gray exposed at Taylor on July 29th to Aug. 2nd, was taken sick 11 p. m., Aug. 6th. G. W. Stogner exposed at the Gray house 10 a. m. until he sickened 3 p. m., Sept. 2nd.

Miss Mollie McCarty exposed at Gray house from 2 p. m., Aug. 27th till she sickened 9 a. m., Sept. 1st."

THE MISSISSIPPI DOCTOR

The Journal with a vision, the delivery of modern medicine to the masses at less cost to the individual and more profit to the practitioner. The champion the small hospital, the hub around which this service must be built.

W. H. ANDERSON, M.D., *Editor and Mgr.*
MILDRED P. ANDERSON, *Assistant Editor*

Official Organ of
Mississippi State Medical Association
Mid-South Postgraduate Medical Assembly
Owned by
Northeast Mississippi 13 County Medical Society

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You will want to read and re-read the paper of Dr. Beck in this issue of the journal. He is doing real foundation work in heart surgery. This bids fair to be a big field in surgery. Heart disease is our major human enemy. The kindness in a man's heart is the greatest human power yet known. Some men need a lot of "un-kindness" cut out. What makes that little human dynamo kick off with its first beat no man knows exactly. When once started it is not allowed to stop for any length of time until it stops forever. Hence we must operate on the heart while it works. We must doctor the sick heart while it works at its post of duty, sending the crimson life fluid to every artery, capillary and vein of the body. Some of Dr. Beck's operations have been to give the heart room to work. Sound reason is at the back of these indications. To do the work Dr. Beck is doing, has required much technical preparation, and in addition vision and courage. "As a man thinketh in his heart so is he," and as a man's heart functions so is he physically, in a very large measure. We thank Dr. Beck for this paper.

The meeting of the Northeast Mississippi 13 Counties Medical Society at Amory on September 17th was one of the finest we have had in many months. It was a fine scientific program and every essayist gave a good paper. It was mighty good to have Dr. Robert A. Strong, of Tulane, on the program. He is an outstanding authority on his subject and he is a teacher of unusual ability. The entire state is fortunate in having him give the courses in pediatrics. Our president of the Mississippi State Medical Association read a very fine paper, a very timely one. It gave much valuable and dependable information on immunization. Dr. Garrison urged the physician to be more active in this work so that it would not be necessary for public health departments to do it. He urged the doctors to be wide awake, sell themselves to their clientele, educate them, immunize them, practice preventive medicine. Dr R. A. Strong, Jr., was a society guest essayist. He read a carefully prepared paper on "Suprarenal Cortex Hormone." Dr. W. L. Little, of Wesson, president-elect of the Mississippi State Medical Association, was an appreciated guest of the association. Dr. Little made a brief talk at the banquet paying a splendid tribute to this society and to The Mississippi Doctor and urging the importance of vision and character in the profession. Dr. Felix J. Underwood presented Dr. J. A. Aker, Jr. with a new bag and extended him a cordial welcome back home. He was joined by the entire society. With him our society feels stronger and more secure. The banquet at the Park Hotel was unusually nice. The doctors of Amory are most generous and cordial entertainers and the society is grateful to them and will look forward with pleasure to a return meeting.

Dr. R. W. Hall, of Jackson, has been the Association's pioneer in the field of dermatology. It is a big field within itself and one that the average practitioner does not care to tackle. We appreciate the work of Doctor Hall. He has worked hard and patiently. We are delighted that he is to have associated with him Dr. James Gant Thompson who has just completed his course in dermatology from the Skin and Cancer Unit of the New York Post-Graduate Medical School and Hospital which is a department of Columbia University. After fifteen years of persistent effort, Dr. Hall will no doubt enjoy having this able help associated with him. The profession will no doubt enjoy having this able help associated with him. The profession will no doubt feel a pride in the development in this field of practice in their state. So it is that Jackson and other cities of our state grow and develop as medical centers. The people are being better served and the profession should be gratified.

Dr. Harvey Garrison, President of the Mississippi State Medical Association, is making a plea for an added membership in the Southern Medical Association. His call should be heeded we believe. This association gives special attention to the medical problems of the South. We should have a fine attendance at the meeting in Baltimore in November. Baltimore is a great medical center. It will do you good to breathe the medical atmosphere of this great city of learning for a few days. The scientific program will be unusually good. Washington City is near by and many will enjoy a visit to the capital of our nation. We understand that Dr. Garrison is calling a meeting of all the state medical association presidents in Baltimore. This is a fine idea in our opinion. It is a productive thought. It should and will result in great good. Here they can swap ideas and discuss problems common to all. This getting together of the heads of the associations will be inspirational. Its influence will be broadening. Its discussion of present day problems, both scientific and economical, will tend to accuracy. We congratulate Dr. Garrison on this move.

The Mississippi State Medical Association will hold its next session at Meridian next May. The attendance upon the state association is far below what it should be. The doctors of Meridian are very cordial and their entertainment will be lavish, judging the future by the past. Good hotel accommodations at a reasonable price is a very important item. Meridian can and will supply this need. In this issue of the journal the hotels of Meridian are extending cordial greetings to the doctors and assuring them that they are looking forward with pleasure to our coming next May.

As for our part we would like to see the Southern Medical come to Memphis next time. Memphis is steadily growing as a medical center. All medical men everywhere love to visit Memphis. This city has much fine medical talent. The first day of the program is given over to the local men. Memphis would do this day in fine style.

Other things being equal, please trade with the men who advertise in The Mississippi Doctor. This will not hurt you. It will help us. Learn to be a helper, a booster, not an obstructor, not a fault finder.

Please take note of the added essayists furnished us by Dr. A. F. Cooper. The Mid-South bids fair to be bigger and better than ever. It is a great post-graduate course concentrated into four days.

The annual meeting of the Mississippi State Medical Association for 1910 was a notable meeting. It was held on the University campus at Oxford. The association was the invited guest of the University. The meetings were held in the old Chapel. The new dormitory, Gordon Hall, was set apart for the sleeping quarters of the members in attendance. Meals were served in the mess hall of this building. Certain homes in the town were thrown open to other members. This writer well remembers that he was taken to the home of one of the bankers (Mr. Porter) and was most cordially and royally entertained. He was told to consider the premises as his individual home for the time and to feel perfectly free to invite any friends of his to share it with him. This he did and two of his dear friends—Dr. E. A. Cheek and Dr. L. V. Dickerson, both long dead, were his guests. It was notable and unique because of the fact that every item of the expense was absolutely free to visitors. We were allowed to pay for our shoe shines and I think that was due to an oversight as every one else was subsidized for the occasion. The scientific program was unusually good. Among the contributors were such men as Drs. J. W. Barksdale, H. R. Shands, H. L. Sutherland, M. O. Shivers, C. C. Bass and Isadore Dyer. There were at least four new men who have become prominent and widely known, who made their debut on this occasion. I refer to Drs. F. J. Underwood, J. P. Wall, Henry Boswell and the lamented R. M. Boyd. This writer chanced to be chairman of one of the sections and in this capacity had the privilege of introducing Drs. Underwood and Boyd to the Association and initiating them as workers. Both of these have done yeomen's service since then. Dr. Underwood chose to work in the spotlight and has acquitted himself in a splendid way. Dr. Boyd chose the more difficult if not the more noble course of working, almost alone in his library and laboratory. Few men in the state have delved more deeply into the hidden things of medical science than did he. He was a great student, a seeker after truth for truth's sake. No one may ever know the joy and satisfaction that came to him as the result of his earnest, patient and tireless pursuit of true medical knowledge. There was nothing spectacular about the man nor his methods. He sought knowledge and pursued it for the sake of knowledge and for the benefit of those who suffer. I wish that he might have been better known that he might have been better loved and more appreciated by the members of the Association. The paper that he presented on this occasion, like all his writings, was a true classic. In the brief discussion that it elicited Dr. D. J. Williams simply stated "this is one of the best papers I have ever heard read before this Association." Dr. Boyd has been dead less than a month but his worth will be better understood as time goes by.

Dr. J. W. Gray, also dead, read a paper entitled "Why Vital Statistics?" In this paper he made one striking and characteristic statement. It was this: "It is easier to establish, legally, the birth and death of farmer Smith's jack-ass than that of the illustrious and beloved Lamar." I think the records of the State Board of Health will show that this writer introduced the resolution that established the vital statistics department in Mississippi. Only a few days ago our president, Dr. Garrison, in a fine paper read before my own component society referred to statistics and since then I have heard some criticism of these statistics from doctors. Grant that they are not what they should be, whose fault is it? Who write and record these statistics? The doctors do, of course. I wonder why doctors do not co-operate more faithfully than they do in this important field of work? It is a duty made so by the law of the land and it is a moral duty they have assumed when they offer to serve the people as physicians. I fully realize that doctors are hard worked and poorly paid and rarely appreciated by the public, but does that excuse them for dereliction in discharge of duty? I think not. Let us do our duty tho the heavens fall.

The recent meeting at Amory was, I think, a success and the doctors of Monroe County were very happy to have their friends as their guests. We anxiously await the next meeting within our borders.

G. S. B.

ALONG THE MEDICAL HIGHWAY

CONTINUES PRACTICE

Dr. Donovan C. Browne announces the continuation of the Practice of Gastro-Enterology formerly Drs. Sidney K. Simon—Donovan C. Browne, 1520 Aline Street, New Orleans, La.

DELTA MEDICAL SOCIETY

Dear Doctor:

Inclosed is a program for our next semi-annual meeting to be held at Belzoni, Wednesday, October 14, at 2:00 p. m. We hope that you will make your plans now to attend, for the program contains some special features that will be of interest to each and every physician in the Delta.

We have three guests on our program as you will note. Dr. Wesley Hall, of Shelby, Mississippi, is our guest from the Clarksdale and Six Counties Medical Society, taking the place on our program of the Bolivar County essayist. Dr. R. M. Adams, President of the Mid-South Post-Graduate Assembly, is a Mississippian whom you all know. He is from Ripley, Mississippi and a stalwart not only of Mississippi medicine but throughout the tri-states. His subject, "The Conquest of America's Scourge—A Challenge to the Medical Profession," is one that every member of the Delta Society should hear. Dr. H. King Wade of Hot Springs, Arkansas, is bringing us a message on a subject that every general practitioner has to contend with. Dr. Wade is a man who has had wide and varied experiences with Venereal disease and has a wide reputation throughout the South.

Since our last meeting the governing board has had some two or three meetings and has several recommendations to bring before the society for ratification. They feel that all of the recommendations will help to make our society a better one. They want your opinion regarding these suggestions.

It is of course needless to mention that Belzoni always shows us a good time and the entertainment committee informs me that they are making plans to have plenty of good food and clean fun for everyone.

Make your plans now to attend and invite your friends.

Faithfully yours,
F. M. ACREE, Sec.
Delta Medical Society

TO THE PHYSICIANS OF MISSISSIPPI

I have just returned from Birmingham, where I visited the offices and officers of the Southern Medical Association. It was my privilege while there to look over the "proof sheets" of the program for the meeting which is to be held in Baltimore, November 17-20, and I assure you that it is to be one of the most outstanding as well as profitable meetings in the history of the Association.

As you know, the Southern Medical Association is devoted largely to the problems of the physicians living in the Southern States. If you have not already done so, allow me to urge you to send the Secretary-Manager of the

Southern Medical Association, your check for $4.00, and ask him to enroll you as a member and send you the Journal, which he will be glad to do, for one year. The Journal alone is worth more than the price of membership! Since the Southern Medical Association is doing a real service to the physicians of the South, I feel that the loyalty of the physicians in the Southern States should demand that they enroll as a member and in this way, help to carry on this most valuable work, as is now being conducted by the Southern Medical Association.

I am calling a meeting of the Presidents and Presidents-Elect of the various States in the Southern Medical Association territory, and they are to be the guests of the Southern Medical Association at a dinner on Tuesday, November 17th at 7 p. m., at which time there will be a free discussion by them and the officers of the Association of the problems confronting the Medical Profession throughout the South. The problems discussed at this meeting will be fully reported in the Journal.

Every physician in the southland should keep abreast of the times and of the many problems confronting his profession, and to do so, it is necessary to contribute one's part to the organization. I feel that there is no better way to do this, than to enroll as a member of the Southern Medical Association.

I hope you will send your check to the Secretary-Manager of the Southern Medical Association, immediately.

With every good wish, I am,

Sincerely yours,
HARVEY F. GARRISON,
Councilor from Mississippi,
Southern Medical Association

RESOLUTIONS

WHEREAS, the physicians in this territory have had five lectures on Pediatrics from Dr. Robert A. Strong, Professor of Pediatrics, Tulane University, which have been highly instructive and very pleasant;

THEREFORE, be it resolved that the physicians of this district express to Dr. Strong our appreciation for his patience, efficiency, and instructive lectures, and assure him that few men could have done so well and none could have done better;

BE IT FURTHER RESOLVED, that we express our appreciation to the Committee on Post-graduate Medical Education of the Mississippi State Medical Association, Tulane University, the State Board of Health, and the Commonwealth Fund, for having made it possible for us to enjoy the benefit of these lectures.

BE IT FURTHER RESOLVED, that a copy of these resolutions be sent to Dr. Strong, the Committee on Post-graduate Medical Education, Tulane University, the State Board of Health, and the Commonwealth Fund.

J. RICE WILLIAMS
E. K. GUINN
Committee on Resolutions

Houston, Miss.
Sept. 22, 1936.

COMING MEETINGS

American Medical Association, Atlantic City, June 7-11, 1937.

American Academy of Ophthalmology and Oto-Laryngology, New York, Sept. 26-Oct. 3.

American Association of Obstetricians, Gynecologists and Abdominal Surgeons, Breton Woods, N. H., Sept. 14-16.

American College of Surgeons, Philadelphia, Oct. 19-23.

American Congress of Physical Therapy, New York, Sept. 7-11.

American Hospital Association, Cleveland, Sept. 28.-Oct. 2.

American Public Health Association, New Orleans, Oct. 20-23.

Association of Military Surgeons, Detroit, Oct. 29-31.

First International Conference on Fever Therapy, New York, March 30-April 2, 1937.

Radiological Association of North America, Cincinnati, Nov. 30-Dec. 4.

Southern Medical Association, Baltimore, Md., Nov. 17-20.

CENTENNIAL PROGRAM

At Jacinto, Mississippi
October 11, 1936, at 1:00 p. m.

Meeting called to order by the chairman, Dr. L. L. McDougal, Sr.

Invocation, Rev. E. H. Cunningham.

Welcome Address, Senator M. A. Shook.

Response to Welcome Address, Dr. J. R. Hill.

History of Northeast Mississippi, Dr. W. A. Evans, Aberdeen, Miss.

Tribute to the Deceased Physicians of Old Tishomingo County, Dr. W. A. Johns.

Roster of the Living Physicians of Old Tishomingo County, Dr. T. P. Haney, Sr.

Medical Progress of the Century, Dr. W. H. Anderson.

Present Problems of Tuberculosis, Dr. W. H. Sutherland.

Discussion, Dr. C. W. Norwood, Dr. N. C. Waldrup, Dr. T. P. Haney, Jr., and Dr. Henry Boswell.

Benediction, Rev. J. D. Thompson.

ALL DOCTORS ARE ESPECIALLY INVITED.

The members of the Alcorn, Prentiss and Tishomingo County Boards of Supervisors are invited.

All ministers of the three counties are also invited

General public cordially invited to attend.

MEMORIAL HOSPITAL MEETING

In company with Doctor W. H. Anderson and his wife I drove over to Birmingham, Ala., last Wednesday afternoon, Sept. 30th. We went to attend a meeting of the chairmen of county groups whose purpose is to raise funds to build and equip a hospital to care for and rehabilitate crippled children in the tri-states of Alabama, Mississippi and Tennessee. This hospital is to be erected on the site of old LaGrange College in Colbert County, near the line between the three above mentioned states. It is to be named in honor of President Roosevelt and is to be known as "The Roosevelt Memorial Hospital." Its services are to be absolutely free to all children living in these three states who may need such service and who may not be financially able to pay for this service.

At this meeting which was held in the terrace of the Thomas Jefferson Hotel in Birmingham, following a delightful banquet, several interesting and illuminating speeches were made and telegrams of endorsement were read from the governors of the three states. Drs. Underwood, Garrison, Anderson and myself were invited guests. Drs. Underwood and Anderson are serving as vice-presidents of the organization from Mississippi. Dr. Underwood was the personal representative of and spokesman for Governor White. Mr. Ralph Saliba is in charge of the organization. He is a most remarkable character and is a veritable human dynamo. He was spoken of as such by all the speakers who know him personally. He is giving his full time to this organization work. He expects to complete the organization of the forces in Alabama within a few days and will then begin the work in Mississippi and Tennessee. Alabama's quota for building expense is $750,000.00. Of this amount the federation of labor organization has pledged $150,000.00 and the Syrian clubs $25,000.00.

Much praise and eulogy of Mr. Roosevelt was expressed by the various speakers. He was acclaimed the greatest statesman that has ever occupied the white house in Washington. And one eloquent speaker characterized him as the "greatest humanitarian since the pale faced Jew walked along the shores of the sea of Gallilee and climbed the hills of Judea."

It was, in all respects, a fine meeting without a single pessimistic or discordant note. Enthusiasm and optimism were marked and, almost, unlimited. The guests from Mississippi went there with no fixed opinions concerning the undertaking, but I think they were all "sold" on the proposition before they left. Unfortunately, Drs. Underwood and Garrison were forced to leave the meeting early—before the best speakers of the evening were heard. But the splendid food and the general hospitality of the occasion together with the explanation of the plans and purposes of the organization, I think, completely sold them on the work.

If and when this hospital shall be built and if the plans for its operation shall be carried out, a great, unique and deserved memorial will be dedicated to a great president, statesman and humanitarian.

G. S. BRYAN.

NOTES ON THE POLIOMYELITIS EPIDEMIC IN MISSISSIPPI

GEORGE W. MAST, M.D.
Mississippi State Board of Health
Jackson, Miss.

Poliomyelitis is one of the most peculiar diseases we have. There are a number of questions about it we would like to know the answers to. Perhaps some of you will be able to answer them for us in the near future.

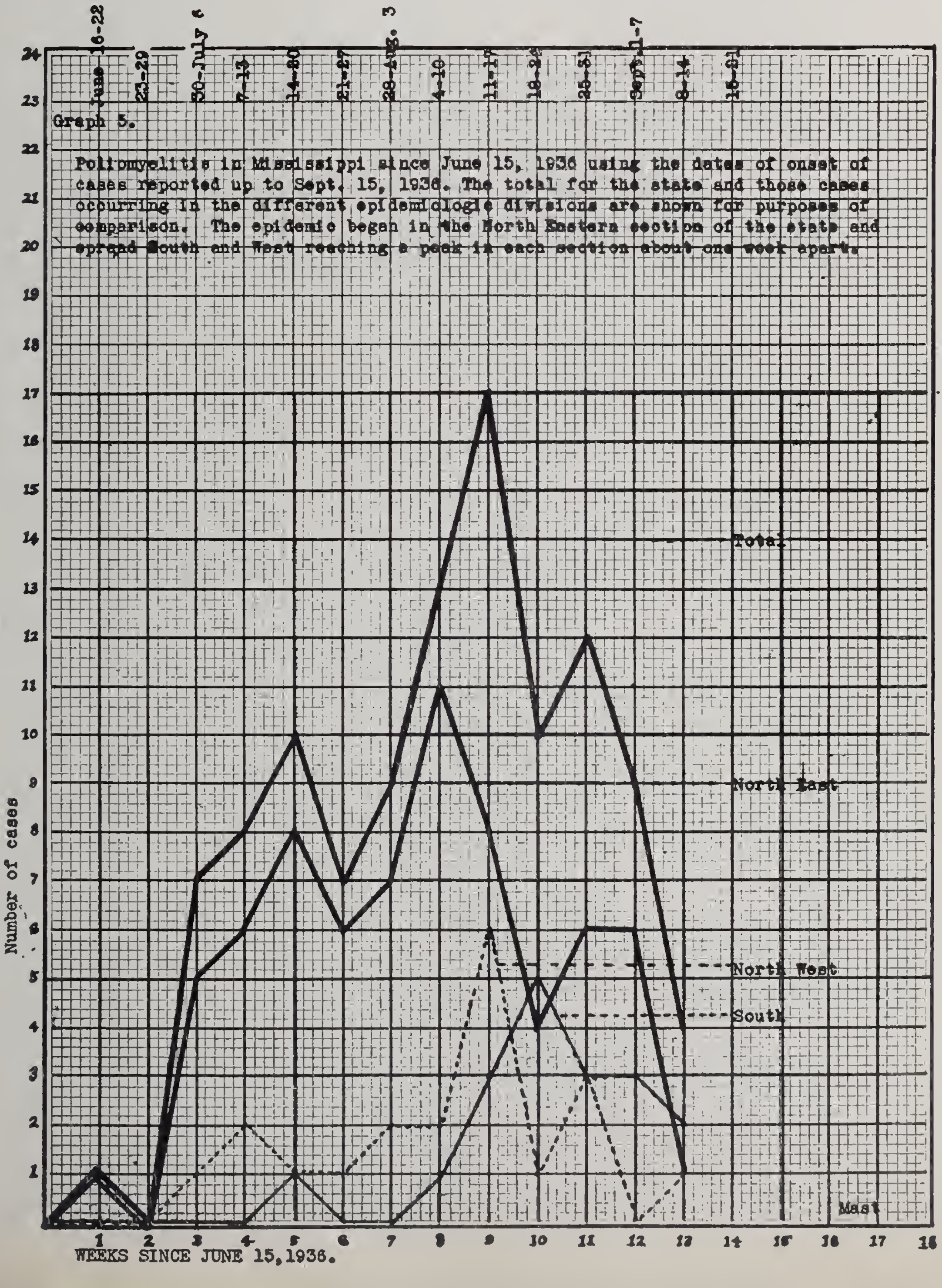
It is a disease of the temperate and subarctic zones. No large epidemics have ever been reported in the tropics. The endemicity and epidemicity increase as you get further from the equator. Why then, should we have it during our summer months when the temperatures approach those of the torrid zones? It usually reaches the peak here in August, but in the Southern Hemisphere its peak is in February or March.

In the Southern States we have about 1.3 cases per 100,000 population, but the New England States and Middle Atlantic States have about 3.4 cases per 100,000 population. We "normally" expect about 300 cases in Mississippi a year, but have had 113 from June 1st to September 15th this year. Curiously though, during the epidemics of the disease, the mortality is lower than it usually is, and we doubt if it all can be attributed to more of them being diagnosed during an epidemic. There must be some other factor present. The completed death reports are not available, but we know of four deaths so far this year. There may be more.

There have been 60% males and 40% females affected here, with 72% of them white and 28% colored. Of course, the area mostly affected is only about 7% negro population, but it will not account for all the apparent difference in the susceptibility of negroes and whites. Did you know that 80% of the cases investigated here had blue or gray eyes, and only about 10% of the cases were distinct brunettes? We have been unable to explain it any other way, and we are gradually coming to believe that there must be a type susceptibility to this disease just as there is to certain other infections and to metabolic disturbances.

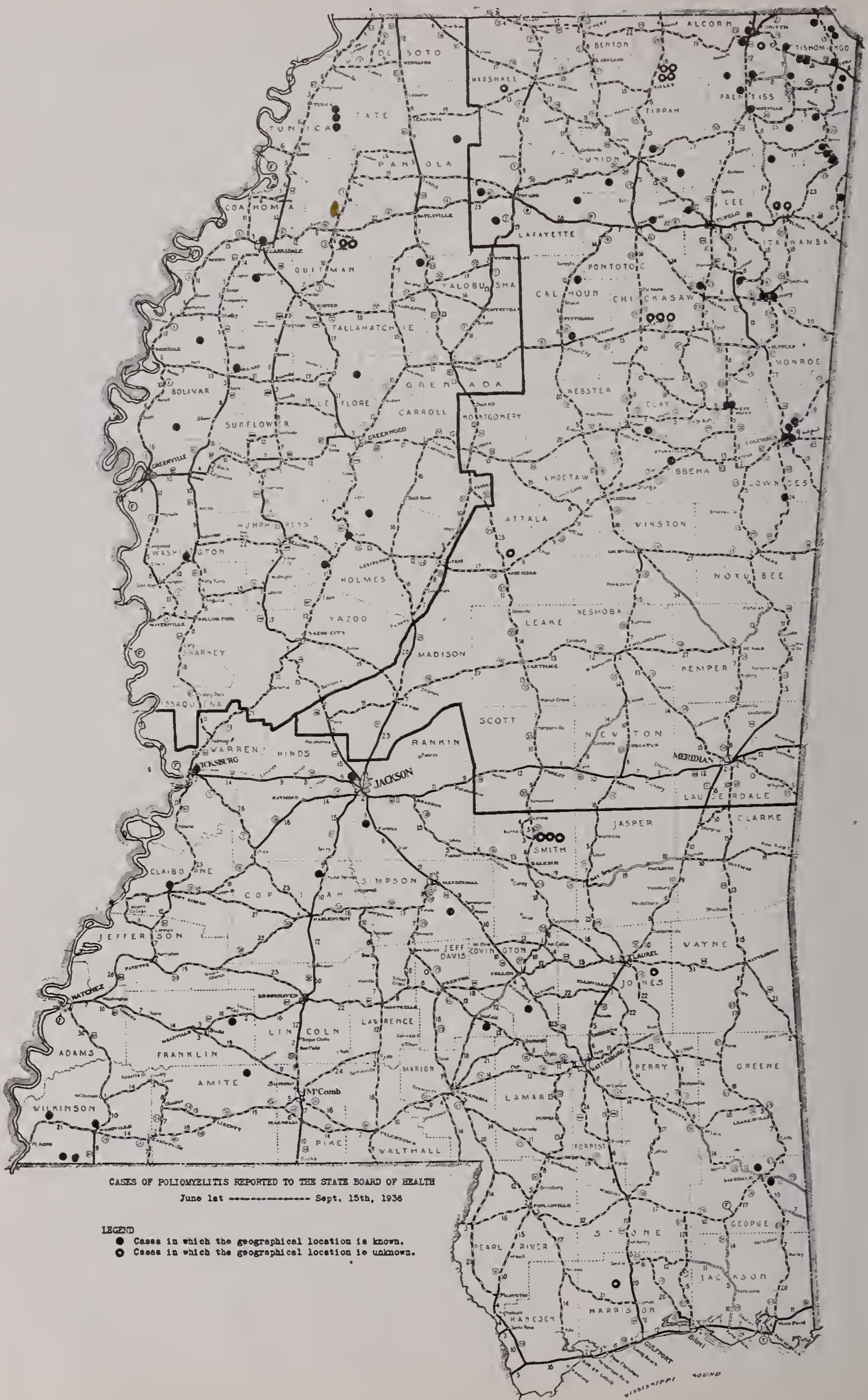
Factors of age, sex, heredity, race, etc., must have some part in the immunological status of these patients. Curiously enough, the few times the disease has hit an area never before affected, such as Guam, New Guinea. etc., it was noticed that those below the adolescent age were almost completely immune, and that young adults were mostly affected.

Here 91% of the cases are below 15 years of age, with the largest number (55%) of them being in the age group between 1 and 4 years, and next largest (19%) from 5 to 9 years. The



Graph 5.

Poliomyelitis in Mississippi since June 15, 1936 using the dates of onset of cases reported up to Sept. 15, 1936. The total for the state and those cases occurring in the different epidemiologic divisions are shown for purposes of comparison. The epidemic began in the North Eastern section of the state and spread South and West reaching a peak in each section about one week apart.


DE SOTO
TATE
TUNICA
MARSHALL
BENTON
ALCORN
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TIPPAH
PRENTISS
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COAHOMA
LAFAYETTE
LEE
TUPELO
ITAWAMBA
CLARKSDALE
QUITMAN
YALOBUSHA
PONTOTOC
CALHOUN
CHICKASAW
TALLAHATCHIE
MONROE
BOLIVAR
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GRENADA
CARROLL
MONTGOMERY
WEBSTER
CLAY
GREENWOOD
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CHOCTAW
OKTIBBEHA
COLUMBUS
LOWNDES
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ATTALA
WINSTON
WASHINGTON
HOLMES
NOXUBEE
YAZOO
NESHOBA
LEAKE
SHARKEY
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KEMPER
ISSAQUENA
SCOTT
RANKIN
NEWTON
WARREN
HINDS
VICKSBURG
JACKSON
MERIDIAN
LAUDERDALE
JASPER
CLARKE
SMITH
CLAIBORNE
COPIAH
SIMPSON
JEFFERSON
JEFF DAVIS
COVINGTON
WAYNE
LAUREL
JONES
NATCHEZ
BROOKHAVEN
LINCOLN
LAWRENCE
ADAMS
FRANKLIN
PERRY
GREENE
MARION
AMITE
M'COMB
LAMAR
WILKINSON
PIKE
WALTHALL
FORREST
HATTIESBURG
GEORGE
STONE
PEARL RIVER
JACKSON
HARRISON
HANCOCK
GULFPORT
BILOXI
MISSISSIPPI SOUND

CASES OF POLIOMYELITIS REPORTED TO THE STATE BOARD OF HEALTH
June 1st -------------- Sept. 15th, 1936

LEGEND
● Cases in which the geographical location is known.
○ Cases in which the geographical location is unknown.

youngest to date, (September 15, 1936) in our cases is 2 months, and the oldest 41 years. There has been a little research work done, which tends to show that there is definite hereditary immunity to poliomyelitis, and probably many other diseases, and that those people are fortunate who possess group B (III Jansky) agglutinins in their blood serum. They either are immune, or have a mild attack of the disease. While groups O and A have a more severe form and tend to have multiple cases in their families. There is some evidence to show that about 14 per cent of the population has group B sera. No work of this kind has ever been done in Mississippi, however.

We would like to know whether or not our use of the nose spray this year will "enable" us to have another outbreak of the disease next year, or have the people received their immunity anyway and will not have it again in the same locality for several years, as is usually the case. Our friends in Memphis and New Orleans had better look out,—particularly the former, and some of those in Western Mississippi perhaps. They may have a "nice" outbreak of it next year. We hope they won't, but they stand a good chance of doing so.

We are presenting a graph, which tends to show that our epidemic reached its peak about the week of August 11th, and has been declining since. Notice that it also reached its peak in the different sections of the State at different times, and apparently took a week longer to reach the Southern portion of the State than the Northwestern portion. In other words, it took it about two weeks to go from the Northeastern to the Southern portion of the State, and that's traveling pretty fast for an epidemic of poliomyeliis.

The reports on the effectiveness, or non-effectiveness of the nasal spray we have been recommending, will be published as soon as we have finished gathering the material. We believe it has been of some benefit in Mississippi, however, and so far as we know there have been no cases contract the disease here that have used the spray as recommended for as long as 21 days before becoming ill. With the thousands of people using the spray, we are not inclined to believe this is entirely due to chance.

We are cooperating with the Crippled Children's and Vocational Rehabilitation Division of the Department of Education in the holding of Orthopedic Clinics in the areas affected. It is a consultation service offered the Doctors for their cases of poliomyelitis occurring this year. We realize that most of these patients are wholly unable to pay for the Doctor's services and could not afford appliances of any kind. We hope that we can aid them in preventing contractures and deformities in these patients, and thereby, not only render the service to the Doctors and the patients, but prevent them from being an economic liability of the community.

The medical professions' alertness and understanding have been great assets to us. We knew that they would cooperate with us and back us up, and that is the only way we have been able to accomplish anything worth while. We want them to know that we deeply appreciate their help during this epidemic.

RESOLUTIONS

Whereas, on the night of August twenty-second, in the city of Washington, D. C., death did enter our ranks and remove from us one of our most valued, most brilliant, and most beloved members;

Therefore, be it resolved by the Monroe County Medical Society at its regular meeting on the night of September seventh, 1936 that in the death of Dr R. M. Boyd the society has lost one of its most influential members;

Be it further resolved that in his death the profession of medicine has lost one of its most capable and most efficient members; the State of Mississippi one of its most brilliant and scholarly men; Aberdeen and Monroe County one of their most influential citizens; his acquaintances have lost a most true and loyal friend; his wife has lost a most faithful husband.

Be it further resolved, that while we realize that these losses may never be fully recovered from, we, the members of the Monroe County Medical Society, wish to extend our deepest sympathy to all who mourn his death.

Be it further resolved, that these resolutions be put upon the minutes of the Society, that a copy be furnished all the papers of Monroe County and The Mississippi Doctor for publication, and a copy of them be sent to the bereaved wife.

J. M. ACKER, JR.
J. P. WARD
N. S. DICKSON
Resolutions Committee

24th Semi-Annual Meeting of

PROGRAM DELTA MEDICAL SOCIETY

Belzoni, Miss., Wednesday, Oct. 14, 1936

—PROGRAM—

Business Session—

2:00 p. m. Meeting called to order by President.

Invocation, Dr. J. Crudup.

Announcements.

Order of Business.

Scientific Session—

"Common Cold and Their Treatment," Dr. B. H. Booth, Drew.

"The Traumatic Chest," Dr. Wesley Hall,

Shelby, Miss.

"Why the Idea That Sinus Surgery is Inefficient?" Dr. D. C. Montgomery, Greenville.

"The Conquest of America's Scourge—A Challenge to the Medical Profession." Dr. R. M. Adams, Ripley, Miss.

"The Physician," Dr. George Baskerville, Greenwood.

"Gonorrhea," Dr. J. W. Jackson, Belzoni.

"Gonorrheal Epididymitis and Its Treatment," Dr. H. King Wade, Hot Springs, Ark.

ADDITIONAL MID-SOUTH SPEAKERS

Dr. W. H. Anderson,
Booneville, Miss.

Dear Doctor Anderson:

I think the last name I gave you in our list of acceptances was Dr. E. L. King (Obst.), of New Orleans. Since then Dr. J. E. Moore of Baltimore, has accepted and will talk on the Public Health Implications of the Treatment of Syphilis.

Dr. Geo. W. Kosmak, of New York, will talk on some obstetrical subject.

Dr. Jas. H. Hutton, of Chicago, will talk on Recent Advances in Endocrine Diagnosis and Therapy of Interest to the Man in General Medicine, in which he will present a summary of four and one-half years' work in treating hypertension and diabetes from an endocrine standpoint.

Dr. A. C. Ivy, Professor of Physiology, Northwestern University, Chicago, will discuss the Etiologic and Symptomatic Significance of Malfunction of the Sphincter of Oddi.

We have three or four other irons in the fire and as soon as I can do so I will give you the names of the other speakers.

A. F. COOPER, Secretary.

Tuberculosis: A Surgical Disease*

W. H. SUTHERLAND, M.D.
Booneville, Miss.

When we have a case of fracture of a bone we at once immobilize the limb in one way or another. We do the same thing with any dislocation of any joint or any inflammatory condition. Nature first begins this with pain of the affected bone or joint or inflamed part and with contraction of the adjacent muscles splinting, as it were, until some other help comes to its relief. It is even taught in first aid in cases of fracture, to at once splint the limb before moving the patient and then to handle with extreme care. In an acute abdomen nature first causes contractions of the abdominal muscles, and we have learned some years ago to abstain from the use of purgative medicine, and ,really, to give it is criminal. Not only do we not give anything to increase mobility in any of these cases, but we actually give some form of treatment to aid in the immobility of the inflamed organs.

There are other ways by which nature comes to the rescue of infections; for instance, in peritonitis a protective fluid is poured out between the visceral and parietal membranes which, besides acting as a cofferdam for the infection, serves also partly to immobilize the viscera. In case of a pleurisy an effusion is poured out between the thoracic and visceral pleura which prevents adhesions and therefore obliteration of the pleural cavity, and at the same time this fluid compresses and therefore partially immobilizes the adjacent lung as a protection. Besides this, the external and internal muscles of the thoracic cage become contracted, the diaphragm rises and becomes to some extent fixed, the edges of the ribs over ride, and displacement of the mediastinum toward the effective side all contribute to the diminution in size of the hemithorax of the homolateral side. Incidental to the rest, immobility and compression which are more or less mechanical, there are physiological effects such as lessening of absorption of the products of infection and diminution of circulation of both blood and lymph to the affected lung or organ. It seems true then that the underlying principles of surgery are made use of by nature from the very beginning of most all cases of inflammation by infection or injury. Tuberculosis is no exception.

First, the most important consideration in the treatment of tuberculosis is to make a diagnosis. For one to be given a diagnosis of tuberculosis when it is correct is bad enough, but to make a positive diagnosis and be in error is unforgivable.

Lawrason Brown said, "The most important factor in the diagnosis in the majority of cases of tuberculosis is keeping the disease in mind." It requires more time than most of us care to give in making a diagnosis of tuberculosis, but it is just that one little thing in most of us that causes our failure in making a diagnosis of most diseases. It is not only necessary to make a correct diagnosis when it is tuberculosis but we should be able to tell whether it is unilateral or bilateral, acute or chronic, exudative or fibrotic, incipient or advanced, pleurisy dry or with effusion, cavitation or not. Also, when advanced, to what extent.

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*Read before the Northeast Mississippi Thirteen Counties Medical Society, Amory, Miss., Sept. 15, 1936.

If cavities are present, the location, especially as to whether in the apex or base or near the pleural margin or near the center of the lung, the size of the cavities and if thick walled and, therefore, as a rule, difficult to collapse, or thin walled and easy. The age of the case or patient plays an active part, especially as to treatment for, as a rule, the young are very susceptible to some form of collapse while those of fifty or sixty are much less so.

In making a diagnosis a thorough history is the first and most important step to be taken. Some of the most important symptoms are unusual fatigue, loss of weight, carefully ruling out certain other causes, persistent cough, rise of temperature, especially in the afternoon, and hemoptysis. Often pain in the shoulder, side or upper abdomen means chrônic pleurisy. Of the physical signs the most important is a positive sputum.

Although surgery in the treatment of tuberculosis was suggested by James Carson in the form of pneumothorax as far back as 1820, it was not made use of in the treatment of human beings until 1888 by Forlanina and by J. B. Murphy in 1898. Following this nothing more was mentioned of the operation to amount to much until just after the World War. The treatment consisted of rest in bed, good food and fresh air.,Even this accomplished much toward the arrest and even cure of the disease. During the thirty-six years since 1900 the death rate has fallen from 200 per 100,000 to 60 per 100,000. According to Fishberg the lungs are expanded and contracted 30,000 times in twenty-four hours during ordinary living. This is greatly increased during work and very much decreased during rest and sleep. If it were possible to absolutely immobilize the effected lung as a tuberculous bone or joint is done, only a few months would probably be necessary for an arrested cure. If partial rest of the effected lung is capable of accomplishing this much in a month, then it is reasonable that much nearer complete rest could accomplish much more.

The three most important operations done for the cure of tuberculosis are pneumothorax, phrenic interruption and thoracoplasty. Each has its advantages and its disadvantages. Some authors state that only about five per cent are suitable for pneumothorax and much less for the other two operations. Other authors give a much higher percentage, even as much as ten per cent. It seems that the percentage to be attempted is increasing rather rapidly. Up to a few years ago only the unilateral cases were attempted, the bilateral being contraindicated for any form of collapse. More recently it has been found that it is very common to find in bilateral cases with a collapse of the worse side, the contralateral lung also improves. All forms of combinations of collapse are done but the cases must be carefully selected by a competent thoracic surgeon with the help of a competent phthisiologist.

Just as a case of appendiceal abscess shows that someone has made a mistake, so in a case of tuberculosis allowed to go on to cavity formation and abscess formation shows also that either the patient or some doctor has made a mistake, or probably both. The sooner we realize that tuberculosis is a surgical disease from the beginning and treat it accordingly the sooner it will be arrested in its incipiency. Why allow this disease to take its course when something can be done? If some form of collapse therapy can arrest or cure cases well established, or even moderately far advanced, why not use it in the beginning? If diagnosed correctly, why keep a patient in bed for six or twelve months before beginning or attempting pneumothorax?

I believe all agree that this form of collapse should always be tried first on every case whether incipient or advanced and that it is the best form of any if taken in time and can be done. To postpone this to a later date only invites all kinds of complications which prevent or contraindicate it such as adhesions of the pleura, intestinal lesions, organic heart disease, asthma, emphysema, extreme emaciation, age and dyspnoea from any cause, and many others.

Many cases cannot be relieved by pneumothorax alone on account of one or a combination of some of the abve named complicatins. Internal pneumolysis many times overcomes some of these complications by severing one or many small bands of adhesions which prevent collapse of some cavity by holding it open. Pneumothorax and phrenic interruption are spoken of as revocable remedies and should always be done in preference to the major operation of thoracoplasty when possible. As time passes and the treatment by collapse therapy progresses there should be less and less thoracoplasty done as the cases should not be allowed to advance to the stage that this major operation should be required in order to stop the progress of the disease.

The doctors of this state should take on an educational campaign, establish small tubercular units in many parts of the state and begin teaching the public as we learn ourselves that tuberculosis is a surgical disease from the beginning and must be dealt with accordingly if we ever expect to lower the death rate much below what it now is.

MISSISSIPPI STATE MEDICAL ASSOCIATION
and
COMPONENT SOCIETIES

Anesthesia In Obstetrics And Obstetric Complications*

JOHN C. CULLEY, M.D., F.A.C.S.
JAMES R. SIMMS, JR., M.D.
Oxford, Miss.

The parturient woman of today insists on going through her labor without pain; she has heard of twilight sleep or read of painless childbirth in newspapers or magazines and, therefore, she is, more than evere before, expecting her physician to afford her relief from suffering at this time.

It is partly on account of the pain that the pregnant woman approaches the great ordeal with much more apprehension and fear than the average physician appreciates; she withholds this for the most part from him but never-the-less it is present in her mind. It is up to us to give the patient as much mental and physical comfort as is consistent with the best interests of mother and child.

Soporifics were used by the ancients as a substitute for anesthesia during labor. The Egyptians and Greeks probably were familiar with poppy and Indian hemp. It is thought that the mandrakes which Rachel sought of Leah (Genesis XXX, 14-16) were for the purpose of easing the pangs of childbirth(1).

Ether was first used in obstetrics by Sir James Y. Simpson, of Scotland, in 1847 and later in the same year he introduced chloroform as an anesthetic during labor and used it in preference to ether. He encountered much hostility from the Scotch clergy, who charged him with atheism(2). However, very soon the use of anesthesia in labor became popular because Queen Victoria, of England, enjoyed its benefits in 1853 and 1857(3). It was called the queen's chloroform.

In recent years the list of analgesics and anesthetics used during labor has steadily grown and now includes: ether, chloroform, nitrous oxide, ethelene, cyclopropane, divinyl ether, tribromethanol, spinal, local infiltration, morphine, dilaudid, scopolamine, paraldehyde, and various barbiturates as sodium amytal, pento-barbital sodium, dial and others. Some of the drugs most recently introduced are decidedly too toxic for mother or child or both and are not suited for obstetric use; others may be used either singly or in combination and when judiciously and scientifically employed one may obtain almost complete analgesia and anesthesia in about eighty-five per cent of his cases without ill effects. It has been said that most all of the above agents increase the morbidity and mortality of labor or both mother and child, and the chief objections have been that: (1) they prolong the first stage, (2) the necessity for operative intervention is increased, (3) there is a tendency to postpartum hemorrhage, (4) asphyxia neonatorum is too prevalent, (5) increased nervousness and excitement. In considering come of these objections DeLee(4) says, analgesics and anesthetics properly given actually reduce dangers of labor. They help the mind and they prevent premature and harmful intervention by the doctor.

We have used many of the drugs listed above, either alone or in combination, and in this paper wish to report our experiences. The study includes 272 cases during the course of the past ten years.

CHLOROFORM. Many physicians fear the use of this drug; perhaps because of its greater toxicity for the heart(5) and liver. It is said to have a higher mortality rate than other general anesthetics(6) but this seems to apply when surgical anesthesia and not when only obstetric anesthesia is obtained. Many English physicians prefer chloroform; Clark(7) uses it (in combination with scopolamine) through the entire course of labor and says that in no case does the drug effect the condition of the infant at birth. We have found chloroform to be most satisfactory as an anesthetic during the latter part of the second stage, when the uterine contractions are hard and forceful and as the head is passing over the perineum. Less of this anesthetic is required than is necessary in the use of other agents and its action is more rapid. We have employed it in 245 cases. There have been no mortalities for either mother or child and no untoward effects. The only evidence which we have had in our experiences with chloroform to indicate liver damage was jaundice, which occurred only twice. In one case the jaundice cleared up within a week, while the other persisted for a period of three weeks. However, in the latter case the anesthetic was used throughout the course of labor, which is not our general practice.

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*Read before the Section on Surgery at the Sixty-Ninth Annual Session of the Mississippi State Medical Association, Greenville, May 5, 1936.

There has not been a single case of postpartum hemorrhage in our whole series. In checking over our charts with reference to this condition we find no symptoms recorded to denote hemorrhage except for a fast pulse in a few instances. A pulse of 120 or above was recorded in eleven patients and this finding is accounted for as follows: (a) infection explained the pulse in eight cases, and in one of these there had been a forceps delivery, (b) placenta previa with marked blood loss prior to admission in one case, (c) ruptured uterus and marked loss of blood before admission in another case, and (d) a pulse above 120 was recorded in one case of asthma requiring epinephrin.

ETHER. Our records show that ether has been used in only 17 cases. This group was composed of cases where some operative interference was demanded and surgical anesthesia rather than obstetric became necessary. In versions ether has been the anesthetic of choice because deep narcosis was desired and we felt that in any prolonged anesthesia ether would be safer; however, it is to be noted that chloroform was used in two of the versions but both of these cases were multiparas and version could be accomplished more easily and more rapidly and it was not anticipated that we would have a repair to do in these cases. Ether, likewise, is our anesthetic of choice in cesarean section.

SPINAL ANESTHESIA. While ardent enthusiasts for spinal anesthesia in general and abdominal surgery, we have not had sufficient experience with it in obstetrics to either condemn or praise it. In four cases of normal labor in which it was employed it did not prove satisfactory. Two of the labors went to spontaneous termination, but in the other two forceps had to be used to deliver the child. In all four the second stage was prolonged and the perineum was not sufficiently relaxed to prevent laceration.

In cesarean section we have used this type of anesthetic in two instances. In both the preparation used was one of lighter specific gravity than the spinal fluid and when the head was lowered the pressure of the fetus on the diaphragm produced marked respiratory distress. The latter was relieved at once when the uterus was emptied and the pressure on the diaphragm removed. Others object to spinal in these cases on the ground that in the rolling and tossing due to powerful uterine contractions and pain, the patient may force the anesthetic upward to the medulla, and also on the grounds of peculiar circulatory conditions of pregnant women(8). It is hard for us to follow such reasoning, for if the anesthesia was successfully administered there should be no pain from the uterine contractions and the patient would naturally not roll and toss about.

RECTAL INSTILLATION. There has recently appeared in the literature several articles relative to the Gwathmey technique and its modifications(9). Since the beginning of this paper this method has been used in one case with gratifying results. The technique as given by Gwathmey and McCormick was followed to the letter. Only two instillations of the anesthetic mixture were required. The mother slept for twelve hours after delivery and stated on awakening that she remembered nothing about her labor except the first dose of medicine which was given on admittance to the hospital. This was three grains of pento-barbital sodium (nembutal).

SODIUM AMYTAL AND THE BARBITURATES. These drugs have found much favor in recent years(10)(11)(12). By combining the barbiturates with morphine, scopolamine, rectal ether, or with paraldehyde(13) various authors claim that in from forty-two to eighty-five per cent of the cases one may obtain complete amnesia, partial success in the majority of the remainder, and only a small percentage of failures. It seems to be the practice of some obstetricians to employ large doses of sodium amytal, or other barbiturates, in order to obtain this objective. We feel that this is not good practice because it has been our experience with large doses of these drugs, that there is a definite interference with the respirations of the infant at birth. One should insist that the most important essential of any method for analgesia and anesthesia during labor be absolute safety for both mother and child.

In our series one striking difference has occurred between the group of patients receiving the barbiturates and the group which did not receive these drugs; that is, in the former group a larger percentage of the patients get a few hours of much needed sleep in the period immediately postpartum. The following table will illustrate this point:

1. No preliminary drugs	20.0%
2. Morphine alone	19.2%
3. Amytal alone	41.3%
4. Amytal with morphine	60.0%

In this series we have used the barbiturates for analgesia and amnesia routinely in 110 cases. It is interesting to note a comparison of the length of the various stages of labor in this group as compared with a group receiving morphine alone and with a group where no preliminary drugs were given. The latter group is composed of forty-five patients with exceptionally easy labors and because of this no drugs were used.

LENGTH OF STAGES OF LABOR

	Amytal			Morphine			No Drugs		
Stages:	1	2	3	1	2	3	1	2	3
Primiparas	15.5	1.5	19	22.1	1.8	20	10	1.2	16
Multiparas	9.6	.9	12	8	1.4	14	5.1	.9	16

The use of the barbiturates in our cases did not lengthen the labor, but in using morphine in sufficient doses to definitely ameliorate suffering there was a decided lengthening in primiparas. In determining the so-called normal length of labor we are making use of DeLee's averages(14).

Sodium amytal was used intravenously in two spontaneous deliveries and for one forceps delivery, and in none of them has it proved satisfactory, in that the babies were all cyanotic and resuscitation was extremely difficult but eventually successful.

TECHNIQUE. For the average normal obstetrical case our technique is as follows. It is our rule in the majority of cases to calculate as nearly as possible the exact day of labor; the patient is instructed to take three tablespoonfuls of castor oil at 6:00 p.m. This is followed by 15 grains of quinine. Some observers claim that the quinine has no effect in the production of labor pains, and that whatever results are obtained are due to the castor oil.

In our cases where the patient is positive of the date of her last menstruation we have been able to calculate accurately, within a day, the expected time for labor to begin, and in giving the oil at this time fifty per cent of the cases have gone into labor promptly. Where the patient lives within close proximity to the hospital we have permitted her to take the oil at home with instructions to come to the hospital at the first sign of regular and intermittent pains.

On admittance to the hospital a cleansing enema of soda or soap suds is ordered; no sedatives are given until the patient begins to complain of severe pain. Then a dose of three grains of sodium amytal, or one of the other barbiturates, is given. When the effect of this begins to wear off a second dose is given; then as the patient's pains again become more severe, and no great dilatation of the cervix is evident one fourth of a grain of morphine in 2 c.c. of 50% magnesium sulphate solution is ordered.

We have found that if the barbiturates are given late in the first stage the babies have all been more or less cyanotic and respiration interfered with, and for this reason we have only used it early in the first stage of labor.

When complete dilatation of the cervix has occurred and the presenting part is against the perineum the patient is removed to the delivery room. In those cases where chloroform is used the anesthetist instructs the patient to signify the beginning of a labor pain, and at this time fifteen to twenty drops are applied to an open cone; and the patient instructed to take two or three deep inhalations.

As the perineum begins to thin out a 1% novocain solution is injected along a line through which an episiotomy is to be performed. It is our custom also to make a cross incision at the lower border of the vaginal orifice so that perfect approximation may be obtained later when the suturing is done. By using local infiltration no pain is produced when the episiotomy is done and the patient need not necessarily be completely anesthetized. As the head or presenting part is being delivered the chloroform is pushed to a point of narcosis, and yet not as deep as the surgical stage. At the termination of the third stage repair of the perineum is carried out with very light anesthesia, since the local anesthetic is still in effect. In following this technique in only a very few instances has the mother been able to remember anything about the ordeal through which she has passed.

SUMMARY

To summarize, we have reported a series of 272 cases, the majority of which has been delivered under preliminary barbiturates and morphine, and terminated under chloroform and local infiltration without a single maternal mortality and no fetal mortality which could be attributed to the anesthesia.

In the series five stillbirths occurred. In one of these cases forceps was used because of a contracted pelvis and the mother refused cesarean section. This mother was later delivered by cesarean section of a healthy child. Two were in cases where version was performed for placenta praevia, and in the other two cases the babies were dead before delivery.

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DISCUSSION

DR. B. H. HIGDON (Sunflower): Recent literature abounds with reports and suggestions concerning the use of various analgesics to relieve the pains of childbirth. Dr. Culley has brought us another valuable contribution on the subject, the outstanding value being in the fact that, unlike many other similar contributions, it does not end with the praise and recommendation of any one of the many drugs employed for relief of pain in labor. Dr. Culley and his co-worker, Dr. Simms, are to be congratulated upon their presentation of this excellent paper and the results that they have obtained.

They have reported a series of 272 cases without a single maternal mortality and only five stillbirths, and these possibly caused by other conditions and not the anesthesia.

As Dr. Culley has brought out, the anesthetic is rarely the cause of an asphyxiated fetus or stillbirth, and in determining the causes for these conditions, search should be made for such complications as cord around the neck, obstruction of the respiratory tract or excessive traumatism of labor. In my practice we have a good many mothers who have some systemic disease and we find this oftentimes to be the cause of a stillbirth. No one can doubt that a drug administered during labor can affect the respiratory center of the fetus, but, at present, means for determining the length of time for this effect are inadequate and we have to be guided by clinical symptoms.

Dr. Culley has brought out that his cases were selected from institutional practice, and while his technic is simple, it must be borne in mind that where a delivery is to be made in the home, the problem of anesthesia is quite different to that in institutional practice. Our obstetrical practice is confined exclusively to the home, and oftentimes a home where means for meeting an emergency are inadequate or lacking altogether. Hence, our experience with a number of the drugs mentioned in this paper is so limited that we shall not attempt a discussion. We have never used spinal anesthesia in our obstetrical cases. Sodium amytal intravenously is highly recommended, especially in cases of eclampsia, but, in my experience, it should be given by a trained anesthetist with the patient in an institution.

I have been administering to the majority of my patients during labor three grains of pentobarbital sodium by mouth as soon as labor begins, and if the effect of this begins to wear off before the fetal head is compressed at the vulval ring, I give 1-6 grain of morphine and 2 c.c. of 50 per cent magnesium sulphate solution. When the head is compressed, a few drops of chloroform are given at the beginning of each pain.

The analgesics used to relieve pain during labor are usually less likely to harm the child than the injudicious use of anesthesia, so let us have more patience and be more careful in the selection of any medication during labor.

DR. W. N. JENKINS (Port Gibson): In selecting an anesthetic to be used in obstetrical parctice there are two requirements which must be fulfilled—first, safety to the mother and child, and second, relief of pain.

No elaborate method of anesthesia, such as twilight sleep, should be attempted by the general practitioner. This procedure which was used by the late Dr. Henry Schwartz was very successful, he stating that there was no greater percentage of blue babies and stillbirths than where it was not used. However, when this method is carried out, it is necessary to have the patient in a hospital, and a trained staff of assistants.

It is true that an increasing percentage of babies are being born in hospitals. It is also true that a vast majority of the babies are born in the homes. I am struck forcibly with the safety of the method as outlined by Dr. Culley which he uses in his practice. I am also impressed with the fact that this method can be safely and successfully employed by the general practitioner, conducting a delivery in the home.

In regard to the barbituric acid derivatives, in a conversation with Dr. Richard Paddock, some years ago, he stated that he used very large doses of luminal. I can not subscribe to the use of such drugs in large doses. However, I do use them in doses of three grains, and in the second stage of labor I use a small amount of chloroform. I personally like to use chloroform, because, when administered as I request, I have a light anesthesia and the cooperation of the patient, yet when the delivery is completed the patient has no recollection of those final intense pains.

I thank Dr. Culley and his associate, Dr. Simms, for bringing us this discussion at a most opportune time, a method that we can all employ to advantage, regardless of whether we are conducting our cases in the home or have access to the hospital. I think it is a most excellent routine and I want to thank them for bringing it to us.

DR. H. L. McKINNON (Hattiesburg): Having had a good deal of experience in the last 35 years in obstetrics, I have had an opportunity to try out most of the anesthesias in obstetrical cases. We have one who likes chloroform, another gas and so I have no preference whatever between chloroform, ether and gas. As to the barbital preparations I think if we will hesitate a little and use a vocal anesthetic at the first few hours, encourage the patients by talking to them, and impress on them that it is necessary to have some pain to start off the process of dilatation, we will usually get the cooperation of the patient. My experience is that we use the barbital too early—we prolong the first stage of labor from 30 minutes to several hours, sometimes 10 or 12 hours. Just a few days ago I used a little more ergotol than I usually do, and I was sitting by the table and the baby was born and the patient was not even draped, and we can get whatever result we wish.

I have had a little trouble with chloroform and a little with ether. I think we must select our patients for anesthesia — that begins back with our process of prenatal care, and if we can get our patient in good condition for delivery then a sensible anesthesia is perfectly permissible. I think one is as safe as the other. I have had as much bad luck with chloroform as ether, and none at all with gas. I have had some disgusting results from the barbital group, but if our patient is in good condition physically and allowed to go until we have a reasonably good dilatation, then some of the barbitals may be given carefully. I do not think big doses are permissible at any time, because I think we ought to have the mind of the patient active to carry on normally in the first stage of labor. My method is in the last stage—the finishing of the second stage, I should say, to push my anesthesia to a surgical point; therefore, I have very few lacerations and very seldom do an episiotomy. If we will hold our patients and not get in a hurry, not get afraid, we can usually ease the head over the perineum without a tear. I do not believe I get one-half of one per cent. In primiparas I do take time and I think that is a good practice in obstetrics.

DR. MAXWELL E. LAPHAM (Philadelphia, Pa.) I want to congratulate Dr. Culley and Dr. Simms on their excellent paper and I have not very much to offer beyond what has already been said. I think Dr. Culley's idea of doing episiotomy in certain cases is a good one and the outlining or landmarking the incision in order to approximate the repair is an idea to be highly approved.

As to anaesthesia, I have just one point that I would like to stress. Even though I have had very little experience with chloroform myself, I feel that in a definite group, the toxemias, we should avoid its use for the reason that there is already some liver damage and if we add to that the possibility of chloroform intoxication, the liver damage may be very definitely increased. We ought to keep in mind the delayed reaction of chloroform poisoning which may come on several days after its use, even in small amounts. I, personally, as Dr. Culley does, like gas-oxygen anaesthesia and with ethylene it is the safest anaesthesia used in obstetrics. I have no objection to the use of ether because I have had more experience with it than with others. I believe one should make a definite outline of his method for giving an obstetrical anaesthesia, no matter what he uses. The exact amount should be specified at the beginning of the pain and the patient told to inhale two or three times. Then the mask should be entirely removed from the face during the interval between pains. If one allows the patient to inhale only a small amount of an anaesthetic with each pain and not during the interval, I believe there will be the least delay in the termination of labor and a minimum degree of asphyxiation of the baby.

DR. CULLEY (closing): I want to thank the doctors for their discussion. I appreciate what Dr. Lapham had to say. I have had some experience in his series and got a great deal of information from him. I want, at this time, to pay my respects to my associate, Dr. Simms, who labored so patiently on this paper and helped me out so much in getting up statistics for me.

Asphyxia of the Newborn*

V. C. TEMPLE, M.D.
Hattiesburg, Miss.

Asphyxia of the newborn has been defined as a failure of primary respiration to establish itself with sufficient volume exchange to support life. For practical clinical purposes the term asphyxia covers almost all of the conditions affecting the infant just before, during and after birth. Babies who are the victims of intrauterine disasters which interfere with umbilical circulation, or long hard labors, instrumentation or excessive manipulation, such as in breech or other abnormal presentations, all present the same or nearly the same symptoms regardless of the pathological condition. They fail to breathe entirely or partially and the prime object of treatment is to establish respiration if possible.

These babies are said to be asphyxiated, the degree of asphyxia usually depending upon the amount of trouble present. We do not have at the present time the best of means of telling us, in the first few minutes after birth, just how badly these babies are damaged. Many of them, easily resuscitated, go ahead and die within a few hours or days, with what proves to be an intracranial hemorrhage, atelectasis or other pathological conditions. Others, revived only after considerable effort and time, appear perfectly normal after the first period of danger is passed.

It is not my purpose to present any more statistics on the mortality of the newborn, or to bring before you any original work. I merely want to remind you of some of the present day methods of treating asphyxia and urge their employment where this is not already the case.

Practically all of the careful investigators of the phenomenon of respiration agree that the initiation of respiration in the newborn infant is a chemical process occurring in the circulatory and respiratory apparatus of the body; that at delivery or shortly after, the cutting off of the maternal supply of oxygen permits an accumulation of carbon-dioxide in the blood of the infant, stimulating the previously dormant respiratory center in the brain to activity. A normal baby, with his respiratory tract free of mucus or other obstruction will begin to breathe without any external stimulation of any kind. We do not have to do anything to these babies but prevent loss of body heat with a blanket, remove any obstruction from the respiratory tract and wait for the chemical phenomena which bring about the beginning of respiration. We can accelerate this process by external stimulation, spanking, pinching, etc., and if we are in a hurry to see them breathe these things will bring it about a little sooner, nothing else.

The asphyxiated baby is a real problem, however, and after being worn out with a long hard labor case, or complicated presentation the doctor is not in the best of shape himself to handle it. We are more than anxious to see the baby begin to breathe, and in our anxiety to have this happen we may by too much haste and force take away from the baby what small chance he has to live. The more trouble we have with delivery the more anxious are we to see the baby breathe and the sooner we start in on that baby to make him breathe.

These babies usually have a damaged respiratory mechanism. Interference with umbilical circulation may have damaged the respiratory center from prolonged lack of oxygen. And intracranial hemorrhage may by pressure damage this center. Traction in a breech extraction, or delay in the delivery of a breech, excessive moulding of a large head or the compression of forceps may have done the same thing. Drugs, particularly morphine used within an hour or two of delivery may have depressed the respiratory center below its normal level of response to stimulation. The respiratory center of a premature infant is said to be poorly developed and to respond to stimulation much less than that of a full term baby.

It has been shown that in babies in which there has been a prolonged lack of oxygen during delivery there may occur petechial hemorrhages into the adrenals, liver, lungs, brain or any other vital part of the body. Autopsy reports on consecutive unselected groups of babies dying at or shortly after birth, show that from ten to fifty per cent die from hemorrhage into or around the brain substance. These are unselected cases and our cases would probably show the same thing if autopsied.

In the treatment of asphyxia it must be borne in mind that we are dealing with a baby who probably has some damage, and that we have in our hands a patient who can be very easily damaged further by rough handling. Severe methods have not been shown to accomplish much good; their possibilities for harm are great.

Be gentle and deliberate with the baby. Give him a few moments to start breathing and while waiting clear out the respiratory tract with gauze or better still, with a tracheal catheter. Keep him warm so that his vitality is not still further lowered by loss of body heat. A gentle slap or pinching the feet is probably as effective as holding the baby by the feet and beating on the back. This procedure may do no harm if the baby has no damage but it is hard to see how it will do any good if the baby has an intracranial hemorrhage. A baby with severe, pallid asphyxia is said to have lost all cutaneous reflexes anyway so that no amount of external stimulation or violence seems to do any good.

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*Read before the Section on Medicine at the Sixty-Ninth Annual Session of the Mississippi State Medical Association, Greenville, May 6, 1936.

If artificial respiration is necessary it can be given best with a tracheal catheter. It has the advantage over other methods in that it can be given without fear or further traumatizing the infant and of more completely filling the lungs with air. With the catheter in the trachea the infant can be wrapped in a warm blanket or placed in a pan of warm water to conserve the body heat. Mouth to mouth insufflation is still used a lot. Its disadvantages are that there is some danger of forcing material into the trachea or bronchi producing an atelectasis or pneumonia, and the fact that most of the air breathed into the infant's mouth goes into his stomach.

Whenever possible use insufflations of carbon dioxide 5 to 10 per cent with oxygen 95 to 90 per cent. This procedure seems to be the most valuable improvement in recent years in the treatment of asphyxia. Many hospitals are equipped with infant inhalators and comparatively inexpensive and simple apparatus for administration in the home can be purchased. It is of value not only in initiating respiration but in preventing and treating the subsequent attacks of cyanosis in asphyxiated babies, particularly in prematures. The Dionne prematures furnish a very good example of the value of carbon dioxide and oxygen in this condition, and the following is quoted: "At times the breathing would almost stop, then pick up and race along above the normal rate. For days it seemed impossible that the tiny spark of life in each of their bodies would prove sufficient to produce a continuous functioning of the various systems in the body machine. The babies had to be watched every minute and stimulated frequently to arouse them out of their attacks of cyanosis and dyspnoea. Within the first week cylinders containing oxygen 95 per cent and carbon dioxide 5 per cent and fitted with a reducing valve and inhalator were obtained. This gas mixture replaced all other methods of stimulation. It was a most valuable measure in relieving the attacks of respiratory distress. The inhalations were given as an aperitif a few minutes before feeding time in the early days and with every attack of dyspnoea and cyanosis. It was most interesting and satisfying to watch how the gas would stir up these torpid little babies and produce an energetic sucking from the Breck feeders."

Several drugs are recommended in the treatment of asphyxia. My experience with alphalobeline and coramine is too limited to pass judgment on them. It does seem to me that adrenalin and caffeine are of some value. Whatever drug is used it should be given as soon as possible after birth whenever there is any reason to suspect an asphyxiated baby, as none of them will help a dying or dead baby.

An asphyxiated baby when revived is often a poor nurser and during the first few days takes practically no fluids. If this happens the subcutaneous injection with a syringe of 50 to 100 c.c. of glucose or saline is valuable in preventing and treating dehydration.

It must be admitted that with the most careful and skillful treatment of asphyxia we cannot reduce the present neonatal mortality a great deal. Future developments that we do not have at present may show us better how to prevent the conditions before and during labor that cause asphyxia. But with careful application of the present knowledge in the treatment of asphyxia we can at times bring through a baby that might not otherwise be saved.

CONCLUSIONS

Gentleness, conservation of body heat, removal of obstruction in the respiratory tract, carbon dioxide and oxygen, and when necessary the use of the tracheal catheter for artificial respiration are procedures which can be used to advantage in all cases of asphyxia of the newborn. Their employment satisfies the fundamental requirements in the treatment of asphyxia and they are supplanting the more vigorous methods, which in themselves may do harm.

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DISCUSSION

DR. HARVEY F. GARRISON (Jackson): Dr. Temple has covered his subject very thoroughly, and the only reason that one could offer for discussing his paper, is to emphasize some of the most important points so well brought out by him.

When one has difficulty in resuscitating a newborn, there are two outstanding things to think about: first, intracranial hemorrhage, and second, atelectasis. First, we would emphasize some of the things already mentioned in regard to the rough or man-handling of the newly-born. One should guard against too much energy or roughness in handling a newly-born baby. There is danger in doing more harm than good, if we are not careful about our methods of resuscitation.

The use of alpha-lobelin, coramine and other stimulants, as well as carbon dioxide and oxygen mixtures, are all very important, but there is some danger of over-stimulation, which should be guarded against.

It is generally regarded that many babies lose from one to four ounces of blood, when the cord is ligated immediately after delivery. Our methods of resuscitation can be carried on fairly well with the cord intact, and the extra blood that the baby gets by virtue of the cord not being cut too quickly is a considerable aid to the vigor and vitality of the baby.

The disposition now, on the part of practically every man who is doing obstetrics, is to do everything within his power to prevent the mother from suffering undue pain while in labor, which I assure you is a laudable undertaking. However, many of the newly-born babies are asphyxiated because of the prolonged labor, regardless of what type of anesthetic has been used in such cases. It has been noted, due to the popularity of the barbiturates, that they are coming in for their share of trouble to the newly-born. This also applies to the use of morphine in large doses, and all of these should be guarded against as much as possible.

Where there has been a prolonged labor or any difficulty in resuscitating the baby, it is well to insist on the giving of intramuscular blood.

DR. JOE E. GREEN (Laurel): This is a very important question, and all of you boys who have delivered babies have these babies that are born well nourished, fat, fine babies, have the heart just beating along and just one breath and that puts you on the spot. This is a very important thing and I want to add only one thing to what Dr. Temple said, that is the use of carbon dioxide and oxygen. He said most of the hospitals have these resuscitating outfits. I do not care how far you live from the hospital you can have one of these machines, and it costs about $22.00 all told, and filled with gas will probably resuscitate 20 or 30 babies. It is similar to a gas machine, has a big bag on it and if you don't want to haul it to the country with you, you can fill the bag and when you need it you have it. I have found this very helpful and I want to beg if you haven't got one to get it.

W. H. ANDERSON (Booneville): I do not have the type of machine to which Dr. Green refers, would like to. It is quite true I am sure that we have been too rough with babies in trying to resuscitate them. Often times no doubt, the baby should be kept warm and given more time. It may be sometimes that the babies that are hard to get to breathe are just not normal. There may be something lacking in the uterine life of the baby. Maybe there is a glandular imbalance on the part of the mother, maybe something we do not know. I have seen two or three of those. We may need to check up on the mothers more carefully during the period of gestation.

Inguinal Hernia*

T. E. ROSS, M.D.
Hattiesburg, Miss.

Many factors make inguinal hernia a very important subject for consideration. It is no doubt the most common structural defect in the male, various authorities stating that it is present in one out of 14.9 to one out of 22 men. Out of approximately two and three quarters million men, 21 to 30 years of age, who were examined for the draft, 4 per cent of them had hernia well enough developed to be turned down for full military service. Dr. Leigh H. Watson, in his admirable book, states that the male sex is nine times more liable to inguinal hernia than the female, and gives the relative frequency of 96.33 per cent as compared to all varieties of hernia.

It is not my purpose to discuss the symptoms, diagnosis and complications, but rather the treatment of reducible inguinal hernia and some of the factors influencing its success. For practical purposes, inguinal hernia may be classified as (a) indirect hernia, (b) direct hernia. The former is much more frequent and the cure is simple as compared to the direct.

Mechanical and palliative treatment may be considered as one. It consists in preventing constipation, avoiding violent exercise and sudden strains, and in the application of a suitable truss. It is indicated when other methods of treatment are contra-indicated, and certainly is it applicable in children under three years of age. The yarn truss and the various elastic rubber trusses have apparently produced cures lasting as long as my observation of fifteen years.

In the last few years, there has been quite a revival of the injection treatment of hernia. It seems to be more popular in the middle north and east. L. M. Larson(1) states that the injection treatment has definite indications in the therapy of selected cases of hernia and that the indirect inguinal herniae which are small, completely and continuously reducible, contain no viscus and occur in a young or middle aged individual without any constitutional disease, offer the best prognosis for cure. He used a solution made up as follows: phenol crystals, 50 per cent; specific tincture of thuja, 25 per cent; alcohol, 25 per cent. In 137 herniae, he reported cures of 93.5 per cent. A. F. Bratrud(2) reports 406 hernias treated with recurrence of less than 4 per cent. Ralph Wolfe(3) reports 84 per cent cures. Mayer (4) using the method for thirty years, claims 98 per cent cures in more than 2000 cases treated.

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*Read before the Section on Surgery at the Sixty-Ninth Annual Session of the Mississippi State Medical Association, Greenville, May 5, 1936.

Various solutions from the original pina mestre to a mild soap have been used. The object of the injection is to produce a proliferation of fibrous tissue at the site of the defect in the hernial region, thereby narrowing the opening and strengthening the tissues so as to prevent protusion of the hernia. Dr. Carl O. Rice(5) stepping from the field of surgery, states that hernia is now among those diseases which can be cared for by the internist with his hypodermic syringe and needle. However, the details of technique are elaborate and they vary slightly among the different men. The injection method will, no doubt, be tried out extensively, but I think it should be used only in the hands of those who are very expert. If the method ever becomes very popular, it is likely that many accidents will happen.

Concerning the operative treatment, a great many methods and modifications have been devised and we get into a maze of names attached to even the minor changes in technic. Success is dependent upon the meticulous care which must be exercised in every step of the surgical procedure. Careful examination of the patient to determine his operability is very necessary and patients past 55 or 60 should not be operated upon except for definite indications. The choice of anesthetics lies between local and spinal, my preference being for local in nearly all cases. Regional anesthesia requires the surgeon to be more careful in his work, thereby producing less trauma of the tissues and this aids in the healing process. Complete asepsis is essential and skin sterilization must, therefore, be thorough. Minute details of technique would be odious, but I would like to impress the importance of perfect hemostasis and conservation of the ilio-hypogastric and ilio-inguinal nerves when dividing the external oblique aponeurosis. The lower flap is carefully cleansed of all cellular tissue on its under side down to the shelving edge of Poupart's ligament, wiping it with gauze in the direction of its fibres. The upper flap is likewise freed and prepared for a suitable distance from the cut edge. Extreme care should then be given to the handling of the sac. It is dissected free from the cord until the inverted funnel effect of the peritoneum is seen, then opened and freed of any contents. Under direct vision, a ligature of No. 2 chromic catgut is used to transfix and tie around the neck of the sac. Both ends of the catgut are left long. The distal portion of the sac is cut away. Needles are threaded onto the two ends of catgut and with the finger of the left hand guiding, the stump is carried up under the transversalis fascia and internal oblique muscle and anchored by passing the suture through these structures. Thus, no infundibulum is left and all possible dimpling of the peritoneum is prevented. This procedure alone may effect a cure in a great many cases of indirect hernia.

The sac of the direct hernia presents a different problem. A circular incision through the transversalis fascia is made around the neck of the sac which is then opened and sutured as it is divided. The cut edges of the fascia are then approximated over this with No. 1 chromic catgut. Search for a direct sac should always be made when repair of an indirect hernia is being done and thus a so-called recurrence may be eliminated.

Construction of a sound floor is the next step and this is secured by approximating the conjoined tendon to the shelving edge of Poupart's ligament. Beginning down as close to the pubic bone as possible, a curved needle, carrying kangaroo tendon is passed from the outer side through Poupart's ligament, under the cord and through the conjoined structures, being guided by the left index finger retracting them upward. It again passes under the cord and through Poupart's ligament a short distance upward and anterior to the beginning point. Passing on up similar sutures are placed until the internal ring is narrowed so that it fits snugly around the cord. The first sutures then are tied on the outer side of Poupart's ligamnt, being careful to see that no fatty or cellular tissue is interposed between the surfaces to be approximated, and that strangulation of the tissues does not occur. The knots of kangaroo tendon are thereby placed superficially to the deep structures. In the event that there is too much pull on the tissues and the suture line, a parallel incision is made through the anterior sheath of the rectus, a partial Bloodgood's modification, thereby relieving the tension. I have resorted to the use of living fascial sutures in only one case and then followed the method of McArthur which consists in using a strip of fascia from the cut edge of the external oblique aponeurosis. The external oblique is next closed over the cord, overlapping to the extent that no tension is produced and a snug external ring is secured. Finally, the subcutaneous fascia is closed with fine catgut and the skin with interrupted silk worm gut. An appropriate dressing is applied and the patient put to bed with a pillow under the knees, thereby slightly relaxing the strain on the suture lines. Usual postoperative care is carried out. Patients are kept in bed from ten to seventeen days, depending upon the factors in each individual case. They are returned to light duty in six to eight weeks and full duty after three months, advising them at the same time to be cautious for several months longer.

In my limited number of cases known recurrences have been considerably less than the average reported. I have used the Bassini method of operation in all instances, making such modifications as necessary to suit the particular case. However, the surgeon should be familiar with the several types of operation and able to apply the principles indicated, for after all, the object is to remedy the structural defect rather than follow a surgical routine. Success or failure is not determined by the attention paid to several details of operative technique but success comes from the utmost care given every detail of procedure from the selection of the patient to the instructions given him on discharge.

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DISCUSSION

DR. E. W. HOLMES (Winona): I want to congratulate Dr. Ross on his excellent presentation. According to W. B. Coley and many others, hernia in the vast majority of cases is a disease rather than an accident, that is, it is due to a congenital defect and the exciting cause plays a minor role.

I think it may be said that with few exceptions ,mostly in old people and young children, that the treatment of hernia is surgical. Numerous modifications of technic have been proposed since the standard modern operation for hernia was devised. But certain conditions have to be fulfilled if the operation is to be a success. The sac must be completely removed, the opening closed, and superficial support given. Removal of the sac alone will produce a cure in about 90 per cent of the cases in indirect inguinal hernia and especially is this true in children. With reference to children, if the wearing of a truss for six months does not produce a cure it is not likely to do so and they should be operated upon. Trusses are not only troublesome but are sometimes dangerous; not long ago I saw a man with a perforated intestine caused by hitting his truss against an obstruction while getting out of a truck.

I do not think the success of the operation depends altogether on the type of operation that is used, but upon how well the particular operation is done. I think the surgeon should use the type of operation from which he gets the best results and the one best suited for the particular case. Personally I use about the same operation as Dr. Ross does except that I do not as a rule transplant the cord.

I want to thank Dr. Ross again for his excellent paper which I enjoyed very much.

DR. GEORGE HENDON (Louisville, Kentucky): Concerning this question of hernia, there have been some recent developments which I think have added quite an important feature to the safety and security of this operation. They can be applied in a hernia almost anywhere, and for me have reduced mortality in umbilical hernias, which we know have always been more or less formidable.

Now our plan is this. We do not pay any attention to the transplantation of the cord; you can transplant it or not just as you choose. We go down as close to the pubic bone as we can, and we do not have any fear of deformity of the cord over the pubic bone. Now we start over on either side—you can go through Poupart's ligament—and start with a suture of kangaroo tendon. We come out with that suture, then we jump over the angle. When that suture is tied you then bring together the two broad surfaces. We know that there is a rule in plastic surgery that your success is dependent on the breadth of surfaces that are brought into contact; that is one of the things it depends on. Now when you bring the edges of the muscle together, as is done in a classical operation, you have a very narrow margin. If you observe this method then you have a broad margin, which is exaggerated, but it is illustrated this way: if my two hands are brought together this way (illustrating with hands) you have a very narrow margin; if the backs are brought together this way (illustrating) we have a broad margin, and we can get the surface on the shelving edge of Poupart's ligament by cutting down a little lower, and on the inside we have a shelf formed and pressure against that shelf has a tendency to approximate these margins. If this same principle is applied in operating upon the umbilical hernias, you don't have to open the abdominal cavity unless there is some special reason, unless you already have a strangulation. In postoperative hernias the same principal can be applied, but for unbilical hernia it takes out that percentage of mortality and takes out the larger part of the morbidity and brings greater success. We use, like the doctor said, kangaroo tendon; we use it to bring the Poupart's ligament and the tendon together. If you choose to cover that with your aponeurosis then you use the catgut. I think, if you will apply this principle, you will find it simpler and sufficient, and it will give you a greater degree of security than the classical operation is doing.

DR. J. W. BARKSDALE (Jackson): We have found that we can simplify this operation in this way. We will assume that this is Poupart's ligament; that your line of incision goes along parallel an inch or an inch and a half, as you choose. In introducing forceps crossways, one, two or three pairs, and catching it right here, and assuming these are the blades of the forceps, they can be turned right back without injuring the tissues at all, and it makes the edge of Poupart's ligament stand out just like a ledge right in front of you, and your approximation is the simplest in the world.

Dr. Hendon is entirely correct in stating that the amount of approximated surface has a great deal to do with the subsequent healing of your wound and remaining healed—the imbrication of the two portions of the fascia, suture this edge over here and this one over here, and then reinforcing if you please, by two uninterrupted sutures, and if you will take this margin of your fascia and simply turn your forceps back, it gives you an operation that can not be equalled by any other method I know of.

DR. ROSS (closing): I simply wish to thank these gentlemen for their kind discussions.

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EDITORIALS

HOSPITAL CARE OF CHARITY PATIENTS

The application of the new laws for the care of the indigent sick in approved private hospitals deserves the best cooperation of the members of the medical profession. For years the Mississippi State Medical Association and the Mississippi State Hospital Association, perhaps realizing better than all others, the great needs of the poor, have worked long and faithfully to secure for these persons the necessary aid from the state. Through the efforts of these two associations working together and the interest of others of vision, laws have been enacted which provide a beginning of great potential good.

The plan is new. There are no precedents to follow. It is being watched by other states throughout the country. If it is successful, it is sure to be used as a guide. Mississippi has the opportunity to be a leader.

The laws do not provide all that should be provided. The amounts allowed for hospital care are small. No provision whatever is made to pay for medical service. If it can be shown that the plan is good, the people will ask and the legislature will grant adjustments.

However, a start has been made and the greatest obligation of the medical profession is to see that the benefits of the laws are not abused. No patient may be admitted to any approved hospital without a signed statement of a licensed physician that he is in need of hospital care and honestly unable to pay for it. A man who has property, mules, cattle and crops, although without cash in hand, is not entitled to free hospitalization. If he receives it at the expense of the state, the true worthy indigent person for whom the aid is intended will find that funds have been already expended. Friendships and other expediences should not influence a reputable physician.

A list of the counties of the state are given below. Opposite each is shown the amount available for each three months for hospital care of indigent persons. It will be seen by any thoughtful person that prospective patients must be carefully selected if the funds are to serve their purpose of caring only for those really in need. It will be recognized also that the funds available will care for few other than emergency cases.

The doctors of Mississippi can make or break the project. Past history shows that they can be counted upon to see that the funds are expended where they can do the most good.

STATE HOSPITAL COMMISSION

COUNTIES OF MISSISSIPPI

County	Population Census of 1930	Funds Available Quarterly For Charity Hospitalization
Adams,	23,564,	$ 718.12
Alcorn,	23,653,	720.83
Amite,	19,712,	600.73
Attala,	26,035,	793.42
Benton,	9,813,	299.05
Bolivar,	71,051,	2,165.30
Calhoun,	18,080,	550.99
Carroll,	19,765,	602.34
Chickasaw,	20.835,	634.95
Choctaw,	12,339,	376.03
Claiborne,	12,152,	370.34
Clarke,	19,679,	599.72
Clay,	17,931,	546.45
Coahoma,	46,327,	1,411.83
Copiah,	31,614,	963.45
Covington,	15,028,	457.98
DeSoto,	25,438,	775.23
Forrest,	30,115,	917.77
Franklin,	12,268,	373.87
George,	7,523,	229.27
Greene,	10,644,	324.38
Grenada,	16,802,	512.05
Hancock,	11,415,	347.88
Harrison,	44,143,	1,345.27
Hinds,	85,118,	2,594.00
Holmes,	38,534,	1,174.34
Humphreys,	24,729,	753.62
Issaquena,	5,734,	174.75
Itawamba,	18,225,	555.41
Jackson,	15,973,	486.78
Jasper,	18,634,	567.88
Jefferson,	14,291,	435.52
Jefferson Davis,	14,281,	435.22
Jones,	41.492,	1,264.48
Kemper,	21,881,	666.83
Lafayette,	19,978,	608.84
Lamar,	12,848,	391.54
Lauderdale,	52,748,	1,607.51
Lawrence,	12,471,	380.05
Leake,	21,803,	664.45
Lee,	35,313,	1,076.18
Leflore,	53,506,	1,630.61
Lincoln,	26,357,	803.24
Lowndes,	29,987,	913.86
Madison,	35,796,	1,090.90
Marion,	19,923,	607.16
Marshall,	24,869,	757.89
Monroe,	36,141,	1,101.40
Montgomery,	15,009,	457.40
Neshoba,	26,691,	813.42
Newton,	22,910,	698.19
Nouxubee,	25,560,	778.95
Oktibbeha,	19,119,	582.66
Panola,	28,648,	873.06
Pearl River,	19,405,	591.37
Perry,	8,197,	249.01
Pike,	32,201,	981.34

Pontotoc,	22,034,	671.49
Prentiss,	19,265,	587.11
Quitman,	25,304,	771.15
Rankin,	20,353,	620.26
Scott,	20,914,	637.36
Sharkey,	13,877,	422.91
Simpson,	20,897,	636.84
Smith,	18,405,	560.90
Stone,	5,704,	173,83
Sunflower,	66,364,	2,022.47
Tallahatchie,	35,568,	1,083.95
Tate,	17,671,	538.53
Tippah,	18,658,	568.61
Tishomingo,	16,411,	500.13
Tunica,	21,233,	647.08
Union,	21,268,	648.15
Walthall,	13,871,	422.72
Warren,	35,785,	1,090.56
Washington,	54,310,	1,655.12
Wayne,	15,295,	466.12
Webster,	12,128,	369.61
Wilkinson,	13,957,	425.34
Winston,	21,239,	647.27
Yalobusha,	17,750,	540.94
Yazoo,	37,262,	1,135.57
	2,009,821	$61,249.93

MINIMUM MEDICAL FEES

In the New York State Journal of Medicine of August 15 appears the minimum fee schedule for the medical treatment and care of injured employees as applied to Metropolitan New York under the Workmen's Compensation Law. It is interesting to compare the fees allowed in New York with the fees prevalent in Mississippi for the same services. It is significant that according to the New York law "all fees and other charges for such treatment and services shall be limited to such charges as prevail in the same community for similar treatment of injured persons of like standard of living." The commission is required to remove from the list of physicians authorized to render medical care any one who "has rendered medical service under this Chapter for a fee less than fixed by the commissioner as the minimum rate in his locality." Some of the fees allowed follow.

GENERAL MEDICO SURGICAL SERVICE

First visit, including reports,	$3.00
Office call,	2.00
Home call—day,	3.00
Home call—night (if call received by doctor between 12 m. to 7 a. m.),	5.00
Hospital call,	2.00
Salvarsan, plus cost of drug,	5.00
Tetanus antitoxin, add cost of drug to routine fee.	
Strapping of shoulder, routine service fee plus	1.00
Strapping of hip, routine service fee plus	1.00

ANESTHESIA—when given by other than operating surgeon:

Gas, first one-fourth hour,	5.00
Gas up to one-half hour,	10.00
Gas up to one hour,	15.00
Gas each additional one-half hour,	5.00
Ether up to one-half hour,	5.00
Ether each additional one-half hour,	5.00
Chloroform up to one-half hour,	5.00
Chloroform each additional one-half hour,	5.00
Spinal for first hour,	15.00
Spinal over one hour,	20.00
Intravenous anesthetic to one-half hour,	10.00
Intravenous anesthetic to one hour,	15.00
Intravenous anesthetic over one hour,	20.00
Local anesthesia by operator is part of operating fee, as scheduled.	

SURGICAL PROCEDURES

INCISION

Incision for superficial abscess as furuncle or boil,	3.00
Incision for abscess, carbuncle with multiple pockets,	5.00
Incision of deep abscess or infection,	25.00
Paronychia,	5.00
Laparotomy, exploratory only (3 weeks after-care),	100.00
Simple bowel resection (3 weeks aftercare),	150.00

EXCISION

Removal of nail, finger or toe, including local anesthetic,	5.00
Excision of sub-deltoid bursa (3 weeks aftercare),	50.00

REPAIR

Hernia, single (including assistant's fee) 8 weeks after care),	75.00
Hernia, post-surgical (including assistant's fee) (8 weeks after care),	100.00
Suture of soft tissue wound, such as—Skin: Routine fee plus $1.00 for each suture, maximum,	10.00

AMPUTATIONS

Phalanx (6 weeks after care)	30.00
Arm, disarticulation, uncomplicated (6 weeks after care),	150.00
Forearm (6 weeks after care),	75.00
Hand at wrist (6 weeks after care),	75.00
Thigh, disarticulation (6 weeks after care),	150.00
Femur (6 weeks after care),	100.00
Os calsis (Syme's amp.) (6 weeks after care),	100.00
Laminectomy or other osteoplastic (2 months after care),	200.00

PATHOLOGY

BLOOD

Wassermann,	5.00
Precipitation (Kahn or other precipitation test),	3.00
Any two tests of the above,	7.50
Widal,	3.00
Simple culture,	5.00

URINE

Routine—chemical qualitative with microscopic,	2.00

FROZEN SECTION

Frozen section in hospital, (pathologist at operation),	15.00

TO SOUTH MISSISSIPPI

On Thursday, the tenth, with G. to Columbia, leaving at eight. Fine paved roads through Jackson and to D'Lo, then the famous Mississippi gravel. A preceding rain had made puddles and bridges covered with red clay and a scattering of gravel served to hold the water and to make the going slippery and uncertain as well as to splash the car. The country looked green and farm animals in neighboring pastures appeared well fed and cared for.

A pleasing welcome at the Columbia-Clinic Hosital by Dr. J. Gould Gardner and his gracious wife. A hospital and real home in the

Spanish style set in beautiful grounds with well kept lawns, patio, pools and shrubbery—a beauty spot of Mississippi. A brief inspection showed a hospital of thirty-five beds that would do credit to any community anywhere. Dr. George S. Daly, an associate, in working attire and busy.

In the afternoon with the good doctor through Hattiesburg to Laurel for a quarterly meeting of the South Mississippi Medical Society, the Lady Gardner insisting it would be safer for the car to be driven by a chauffeur. Greeted by a number of the progressive doctors assembled. The program interesting with dissertations on "Infections of the Hand," by Dr. J. Gould Gardner, Columbia; on "Teeth" by Dr. Charles J. Bloom, professor of pediatrics, Tulane University Post-Graduate School of Medicine, New Orleans; on "Common Problems of the Medical and Nursing Professions," by Mrs. Alice Finley, secretary of the State Board of Nurses Examiners; on the "Orthopedic Aspect of Infantile Paralysis," by Dr. H. T. Simon, Professor of Orthopedics, Louisiana State University Medical Center, New Orleans; and on "Carcinoma of the Cervix Uteri," by the editor.

Dinner was served in the air-conditioned dining room of the Pinehurst Hotel immediately following the scientific program.

Later to consult Drs. Stevenson of Lumberton and Davis of Poplarville on the problems of the proper care of charity patients under the new laws.

These gentlemen doctors doing their utmost to serve communities which had seen many of their glories fade with the passing of the big lumber mills and the lack of interest of those who had received much in worldly goods from the former proud forests that once graced the countryside.

Back to Columbia and learning much of the successful development of industry to take the place of former lumbering operations—garment factory, hosiery mill, hardwood mill, wood processing establishment, all bringing employment to residents of this thriving town and its surrounding territory, showing well the realization of the value of proposals of the governor in his own home town.

Spending the night as the guests of the Gardners.

Friday morning a hurried survey of the town, the beautiful grounds of the governor's home, "Golden Acres," the farm of Dr. Gardner with its many young pecan trees already bearing, the State Industrial School with its farm lands and spacious grounds, truly a place of reconstruction for the wayward youth of Mssissippi, the country club, and the community athletic field with lighting for night contests. A brief visit in the home where twin boys of some eighteen months were bringing delight to a family from which a proud and worthy long line of "brothers" had through generations brought honor and confidence to South Mississippi.

Lunch and home to the cares of everyday work. Truly two days well spent.

FROM THE SECOND LADY OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION

Our Mississippi Doctors

Dear Mississippi, our Grand Old State,
Has furnished her quota of men who are great.
In all of the trades, and professions too,
In medicine this is especially true.
Think of Dr. Bass—a noble son,
And the outstanding work that he has done,
We are proud indeed that we can claim
The place of his birth and his honored name.
Dr. Evans, too, who all of us know
Is an authority now on the dread "polio,"
And parents will bless his name with a smile
If he saves them from having a poor crippled child.
Mississippi also very proudly owns
As one of her sons, Dr. Frank Jones,
Who practiced his skill in Tennessee
And his home folks were as proud of him as could be.
There are lots of others whom I could name,
Their names are enrolled in the hall of fame.
But time and space are not allowed,
To say what we wish of those of whom we are proud.
And we are not only proud of **their** worth,
But of the dear "country doctor," the salt of the earth,
Whose office hours are from sun up to sun down,
And often he follows the clock all around.
In all sorts of weather, snow, sleet or rain,
He is off to relieve some patient in pain.
Or he's on a program to make a nice talk,
A message, "come quickly or you won't beat the stork."
He is general consultant, should doubts distress,
From settling estates to making a dress;
Has to take anything in payment as fees,
Except children and dogs, he will not have these.
Each hour's filled with work, full as it can hold,
He doesn't have time to own his own soul.
Let us then toast our doctors of both country and town,
In the purest of water we will all drink it down
With a wish that in heaven there'll be room for them all
And in that happy region they will have no night call.

MRS. W. L. LITTLE

Wesson, Sept. 9, 1936.

TAX-FREE ALCOHOL

Regulations have just been issued regarding the recent amendment to the National Prohibition Act permitting the use of tax-free alcohol in non-profit clinics. The regulations (T. D. 4684) state: "Tax-free alcohol withdrawn by hospitals or sanitariums or by clinics operated for charity and not for profit may be used only for medicinal, mechanical, and scientific purposes and in the treatment of patients. The use of the alcohol and resulting products shall be confined strictly to the premises of the institution withdrawing the alcohol, except that bonafide medicines compounded with alcohol withdrawn by clinics operated for charity and not for profit may be used outside of such clinics for treatment of the patients therein; but such medicines may not be sold. In no case shall alcohol withdrawn tax-free be used in preparation of food products for use in any manner and under no circumstances shall such alcohol be used for beverage purposes or in any product which may be so used."—Bulletin No. 53, American Hospital Association, Aug. 31, 1936.

HOSPITALIZATION AND NURSING SERVICE FOR NON-INDIGENTS

Probably the real burden on the small-wage earner in times of sickness is the expense of hospitalization and nursing service. This is undoubtedly where the "high cost of medical care" comes from. Perhaps even more important than the cost is the fact that these expenses usually must be met by cash payments at the time of illness. If some method could be devised whereby these expenses could be met on the deferred payment plan there would be no more talk about the "high cost of medical care." It is not unreasonable to believe that some method can be devised. One method being advocated nowadays to provide hospitalization without hardship is "group hospitalization," by means of which individuals paying a small amount regularly each month to a group of hospitals in a community may obtain hospitalization for a period of time (in the District of Columbia, 3 weeks) without additional expense. This is not sickness insurance. Participators in this plan are not paying for medical services but for medical facilities, two entirely different things. However, there are some objections to this plan, since usually only the wage earner himself and not his dependents is eligible to participate, and participants are apt to abuse their privilege by desiring hositalization when it may not be necessary or by demanding hospitalization for the full period of time allowed when a shorter perior might be sufficient. These abuses, of course, increase the cost of the plan."—Medical Economics by Wallace M. Yater, M.D. and Ross Garrett, Medical Annals of the District of Columbia, Vol. IV, No. 5, May, 1935.

CHEST SURGERY

I am glad to announce to you that we have added to our staff Dr. John S. Harter of Boston, Mass., in chest surgery. Dr. Marter comes to us as one of the best trained men in the United States; a graduate of Washington University in St. Louis, two years with Dr. Graham, one year with the University of Minnesota in pathology of the lung, and three years with Dr. Oberholt of Boston in chest surgery.

With this addition we are equipped to do every type of chest work that is known now in the treatment of chest diseases.

HENRY BOSWELL

Sanatorium, Sept. 2, 1936.

THIRD DISTRICT HEALTH OFFICERS SOCIETY

A meeting of the Third District Health Officers Society was held at the Bolivar County Health Department, Cleveland, Aug. 14.

The program included the following:

Business Session.

Scientific Session:

1. Special Sanitation Projects in Holmes County.—C. J. Vaughn, Lexington.
2. Finding Typhoid Carriers.—L. A. Barnett, Greenwood.
3. Malaria Control Activities in Bolivar County.—R. D. Dedwylder, Cleveland.

All presentations were followed by general discussions.

The officers of the Society are: L. B. Austin, Rosedale, president; N. C. Knight, Clarksdale, secretary and treasurer; John W. Shackelford, Greenville, and L. A. Barnett, Greenwood, program committee.

L. B. AUSTIN

Rosedale. Aug. 20, 1936.

POSTGRADUATE MEDICAL EDUCATION AN ENDORSEMENT

At the last of a series of lectures constituting a postgraduate course of Pediatrics, delivered by Dr. Robert A. Strong of the medical faculty of Tulane University, the doctors in attendance from the three coast counties realizing the importance of a postgraduate course being made available to all doctors, passed resolutions recommending the continuance of this course and urging the attendance of all the doctors of Mississippi.

No better selection than Dr. Robert Strong could have been made by those in charge of this program. He is no stranger to us, having practiced medicine on the coast for more than twenty years. His close association with the Mississippi doctors during this time enables him to know their needs. His vast store of knowledge, his experience as a teacher and his personality equips him for this work.

We all enjoyed and profited by his lectures and movies and we hope again to have the pleasure of hearing him at some future date.

HARRISON-STONE-HANCOCK
COUNTIES MEDICAL SOCIETY
Daniel J. Williams.

Gulfport, August 19, 1936.

FURTHER ENDORSEMENT

Whereas, the Mississippi State Board of Health, the State Medical Association, State Hospital Association, State Pediatric Association and Tulane University have cooperated in sending Dr. R. A. Strong of Tulane University, School of Medicine, to us with five lectures on pediatrics,

Therefore, be it resolved, that the physicians of Union, Tippah, Benton, Lafayette, Lee, Pontotoc and Marshall Counties hereby express our deepest appreciation for the privilege of attending these lectures.

We especially endorse this course of lectures, which we consider of utmost value to the general practitioner and urge other physicians to make every effort to attend wherever they may be delivered in the future. We especially appreciate the sending to us of Dr. Strong and he has been so courteous and used every effort to make his lectures plain and practical for the general practitioner.

That a copy of this resolution be mailed to each agency co-operating and to "The Mississippi Doctor" and to Dr. Strong.

A list of those attending is attached: R. B. Caldwell, Baldwyn; S. E. Eason, New Albany; E. A. Thorne, Holly Springs; R. E. Shands, Sherman; Ira B. Seale, Holly Springs; J. W. Williams, Ingomar; Z. A. Dorsey, Troy; H. P. Boswell, New Albany; Irvin B. Trapp, New Albany; James I. Mayfield, Blue Mountain; J. H. Windham, Ecru; W. P. Webster, Oxford; T. J. Pennebaker, Cotton Plant; C. M. Murry, Ripley; C. M. Roberts, New Albany; W. F. Coleman, Hickory Flat; W. H. Cleveland, Tupelo; R. M. Adams, Ripley; Archie Stokes, Guntown; C. M. Speck, New Albany; A. L. Gregory, Saltillo; R. G. Grant, Holly Springs; E. B. Burns, Ecru; W. B. Holland, Verona; S. H. Liddell, Myrtle; J. J. McGowen, Ashland; J. C. Goudelock, New Albany; Jessie Mauney, Blue Mountain; Brown Farrior, Ecru Camp; J. E. Tate, Ripley; H. N. Mayes, New Albany; O. W. Lamady, Buffalo, N. Y.; Miss Anne McGovern, R.N., New Albany; Miss Leola Powell, R.N., New Albany; Miss Gertrude Barkley, R.N., New Albany; Miss Virginia McAllister, New Albany; Miss Bess Gaisser, R.N., Tupelo; Mrs. P. L. Henry, R.N., New Albany; Mrs. Z. A. Dorsey, Troy.

Dr. Felix J. Underwood, executive officer of the Mississippi State Board of Health and Dr. H. C. Hicks, director of county health work and epidemiology, attended the first lecture of Dr. Strong's course, Monday, Aug. 10.

S. E. EASON

New Albany, Aug. 20, 1936.

COURSE IN OBSTETRICS

A postgraduate course in obstetrics, including ten lectures and clinics, was held in the Junior High School Building, Meridian, during the two weeks beginning Sept. 14, at 7:30 p. m. The course was conducted by Dr. Maxwell E. Lapham of Philadelphia, Penn., full-time clinician of the Committee on Postgraduate Medical Education, and a cordial invitation was extended to every physician in Lauderdale and Kemper Counties and nearby vicinities to attend.

COAHOMA COUNTY HEALTH DEPARTMENT

Receipt is acknowledged of the Annual Report (1935) of the Coahoma County Health Department, Norris C. Knight, B.S., M.D., C.P.H., director. In it are included many items of interest and an account of worth while work well done. Of especial general interest:

During 1935 Coahoma County and the City of Clarksdale together paid approximately 2-3 of one mill or 23.4 cents per capita for the health service rendered.

One nurse, one oral hygienist (for seven months), and one WPA sanitation supervisor were added to the staff.

Sub-offices were established in Friars Point, Jonestown and Lula.

Communicable diseases have been notably reduced as shown below:

DISEASE	NUMBER OF CASES 1928	1935
Typhoid Fever,	41,	8
Smallpox,	1,	0
Diphtheria,	19,	4
Bacillary Dysentery,	482,	42
Amebic Dysentery,	28,	3
Malaria,	3,316,	144
Whooping Cough,	311,	107
Tuberculosis,	135,	43
Ophthalmia Neonatorum,	3,	1

One can only wonder if there were ever 482 cases of true bacillary dysentery in any county of Mississippi in one year, or even the 42 cases reported for 1935. Bacillary dysentery is a serious disease, one that kills. If there were even 42 cases, actually proved by laboratory examinations, there is indication for intensive work in the future.

The work with tuberculosis, maternal, infant and pre-school hygiene, and school hygiene deserves commendation.

There might be some question raised as to the advisability of a public health department making physical examinations for the WPA and ERA, for entrance into CCC camps, and "to determine the health status of the individual." It is stated that "In this division periodic health examinations are available free of charge to adults throughout the county." Four hundred such examinations were made. There may be some who would consider such examinations as coming within the province of the family physician.

Under the heading, "Laboratory Work," it is stated, "In addition to doing a large amount of strictly public health work during 1935 the laboratory has served as a diagnostic laboratory for the practicing physicians of the county." Specimens examined are listed as water, milk, typhoid fever, tuberculosis, diphtheria, syphilis, malaria, rabies, and **"all others,"** The "all others" are 5,120 in number, totaling more than those specifically listed. It may be a cause of conjecture to some what the "all others" include. It is also difficult to understand why a public health laboratory conducted on public funds should be used as a diagnostic laboratory for physicians in their private practice. It is recognized by thoughtful persons that the funds allotted to public health in Mississippi are too small to carry on strictly public health activities. Why should these funds be spent for work which should be done in physicians' or hospital laboratories in illnesses which have no public health significance?

The section devoted to vital statistics shows a general diminution in death rates.

The picture of a beautiful baby boy appears on the cover of the report with the caption "His future usefulness and value to the world depends largely on his health. Protect and safeguard him from disease." Inasmuch as he is Norris C. Knight, Jr., has he been immunized against diphtheria, small pox, and typhoid?

FOLLOW-UP REPLIES

Do you consider yourself cured of the trouble that brought you to the hospital? "No." If not cured, do you consider yourself improved? "Improved 40 lbs." Do you suffer from any of the same symptoms for which you were operated upon? "I suffer with my other side once in a while I could tell whether that same symptoms." Have you gained weight? "40 lbs." Lost weight? "No." How much? "Gain." REMARKS: "dear dr. I come over to see you I have gain a lots and improve a lots But I suffer once in a while I remain your truly."

COPIED

"What color dress should we wear to the dance to-night?"

"We are supposed to wear a dress to match our husband's hair, so I shall wear a black dress."

"Oh, my goodness, it's impossible. They just don't go that way. I won't be able to attend the dance."

CORRESPONDENCE

I have your letter concerning the publication of bulletins of the Mississippi State Medical Association, and I have nothing to suggest except that you have full control of editorials and papers read before the Mississippi State Medical Association as well as staff meetings and news items in the medical journal.

I want to apologize for my inactivity in sending reports of staff meetings and news items of this community. I shall endeavor to have all staff meetings and medical news of interest sent to you in the future and will try to do better to help in every respect to make the journal a success.

DIRECTORY AND CALENDAR OF MEDICAL SOCIETIES

Information is not complete. Secretaries of societies are urged to send in full data so that it may be known when the societies of the state meet; also the names of the officers directing their activities this year should be known.

MISSISSIPPI STATE MEDICAL ASSOCIATION:

Seventieth Annual Session and Thirty-fourth Annual Session of the House of Delegates, Meridian, May 11, 12, and 13, 1937.

Adams County Medical Society: W. K. Stowers, Natchez, president; F. S. Dixon, Natchez, secretary. Meets third Tuesday each month, Natchez, 7:30 p. m.

Amite County Medical Society: D. H. Thornhill, Crosby, secretary.

Central Medical Society: E. L. Walker, Magee, president; L. W. Long, Jackson, secretary. Meets third Tuesday each month, Robert E. Lee Hotel Roof, Jackson, 7:00 p. m. Except July and August.

Claiborne County Medical Society: E. P. Jones, Hermanville, president; G. W. Acker, Port Gibson, secretary.

Clarksdale and Six Counties Medical Society: D. O. Pierce, Jonestown, president; N. C. Knight, Clarksdale, secretary. Meets fourth Wednesday of March and second Wednesday of November, Elks Club, Clarksdale, 2 p. m.

Clarke-Wayne Counties Medical Society: W. P. Gray, Waynesboro, president; Albert Hand, Shubuta, secretary.

Coahoma County Medical Society: J. A. Slack, Friars Point, president; N. C. Knight, Clarksdale, secretary. Meets second Wednesday each month, Clarksdale Hospital, Clarksdale, 1:30 p. m.

Delta Medical Society: J. W. Lucas, Moorhead, president; F. M. Acree, Greenville, secretary. Meets second Wednesday of April and October. Rotates through five counties, 2 p. m.

DeSoto County Medical Society: J. M. Wright, Hernando, president; L. L. Minor, Rt. 4., Memphis, secretary. Meets first Monday of January, April, July, October, Hernando, 10 a. m.

East Mississippi Medical Society: C. H. Gully, DeKalb, president; T. L. Bennett, Meridian, secretary.

Franklin County Medical Society: L. Costley, Meadville, secretary.

Hancock County Medical Society: A. P. Smith, Bay St. Louis, secretary.

Homochitto Valley Medical Society: Lucien S. Gaudet, Natchez, president; W. K. Stowers, Natchez, secretary. Meets January, April, July and October, 2:00 p. m.

Issaquena-Sharkey-Warren Counties Medical Society: T. P. Sparks, Jr., Vicksburg, president; Leon S. Lippincott, Vicksburg, secretary. Meets second Tuesday each month, Mississippi State Charity Hospital, Vicksburg.

Jackson County Medical Society: W. J. Weatherford, Pascagoula, president; R. G. Lander, Pascagoula, secretary. Meets second Thursday of March, June, September and December, Jackson County Hospital, Pascagoula, 7 p. m.

Jefferson County Medical Society: W. T. Harper, Fayette, secretary.

Newton County Medical Society: W. T. Pennington, Decatur, president; Dudley Stennis, Newton, Secretary.

North Mississippi Medical Society: R. G. Grant, Holly Springs, president; A. H. Little, Oxford, Secretary.

Northeast Mississippi Thirteen Counties Medical Society: Z. A. Dorsey, Troy, president; A. J. Stacy, Tupelo, secretary. Meets third Tuesday, March, June, September and December.

Pike County Medical Society: J. L. Bauer, McComb, president; Elise Rutledge, McComb, secretary. Meets first Thursday each month, McComb, 6:30 p. m.

Pontotoc County Medical Society: L. O. Carruth, Tupelo, R.F.D., president; O. F. Carr, Pontotoc, secretary. Meets first Tuesday each month, Pontotoc.

South Mississippi Medical Society: J. P. Culpepper, Hattiesburg, president; Carlton Temple, Hattiesburg, secretary. Next meeting, Sept. 10, 2 p. m., Laurel.

Stone County Medical Society: Earl W. Green, Wiggins, secretary. Meets with Harrison-Stone-Hancock Counties Medical Society.

Tate County Medical Society: W. D. Smith, Senatobia, president; J. Sidney Eason, Coldwater, secretary. Meets second Wednesday each month, Senatobia.

Tri-County Medical Society: B. L. Crawford, Tylertown, president; R. B. Zeller, Hazlehurst, secretary. Meets second Tuesday of March, Copiah-Lincoln Junior College, Wesson; June, Walthal Hotel, Tylertown; September, Riverside Hotel, Monticello; December, Whitworth College, Brookhaven, 12:30 p. m.

Wilkinson County Medical Society: E. M. Butler, Centreville, secretary.

Winona District Medical Society: P. B. Brumby, Lexington, secretary.

MISSISSIPPI HOSPITALS—CALENDAR OF STAFF MEETINGS

MISSISSIPPI STATE HOSPITAL ASSOCIATION:

Eighth Annual Session, Meridian, May 10, 1937.

Anderson Infirmary: Second Friday, each month, 6:00 p. m.

Biloxi Hospital: First Friday, each month, 7:30 p. m.

Clarksdale Hospital: Second Wednesday, each month, 1:30 p. m.

George C. Hixon Memorial Hospital: First Monday, each month.

Greenwood Leflore Hospital: First Thursday, each month, 7:30 p. m.

Houston Hospital: Last Thursday, each month,

Jackson County Hospital: Second Thursday, each month except July and August. 7:00 p. m.

Jackson Infirmary: Last Tuesday, each month, 6 p. m.

Meridian Sanitarium: Second Thursday, each month, 6:30 p. m.

Mississippi Baptist Hospital: Third Tuesday, each month, 6:30 p. m.

Natchez Sanatorium: Second Tuesday, each month 7:30 p. m.

Northeast Mississippi Hospital: First Monday, each month, 7:30 p. m.

Rush's Infirmary: Second Thursday, each month, 7:00 p. m.

South Mississippi Infirmary: Last Thursday, each month, 5:00 p. m.

U. S. Veterans Hospital, Gulfport: Every Monday, Tuesday, Wednesday, and Thursday, 10:45 a. m.

Vicksburg Hospital: Second Thursday, each month 7:00 p. m.

Vicksburg Infirmary: First Wednesday, each month, 7:00 p. m.

Vicksburg Sanitarium: Tenth or week of tenth each month, 6:30 p. m.

Winona Infirmary: First Thursday, each month, 7:30 p. m.

CENTRAL MEDICAL SOCIETY

A meeting of the Central Medical Society was held at the Robert E. Lee Hotel, Jackson, Tuesday, Sept. 1. The speakers were Drs. W. A. Evans, formerly of Chicago, now of Aberdeen, on "Infantile Paralysis," and H. W. Kostmayer, dean, Tulane University Graduate School of Medicine, on "Some Clinical Applications of the Endocrines in Gynecology."

This program attracted state-wide attention. There were 156 doctors present and the meeting was most excellent from every standpoint.

The program of the next meeting, the first Tuesday in October, will be supplied by the physicians of Simpson County. Among others at this meeting will be Dr. John Harter, the new chest surgeon at the State Sanatorium.

At the November meeting, Dr. L. J. Clark, Vicksburg, will address the Society on "Pneumonia," and Dr. G. F. Rembert, Jackson, on "Coronary Thrombosis." These subjects will be discussed by other physicians who have particular interests along these lines.

At the meeting on the first Tuesday in December, which is December 1, Dr. W. S. Leathers, Nashville, Tenn., is to deliver the annual oration. A very big meeting is contemplated at this time as Dr. Leathers is prominently known and loved by the physicians of Mississippi.

HARVEY F. GARRISON.
Jackson, Sept. 9, 1936.

ISSAQUENA-SHARKEY-WARREN COUNTIES MEDICAL SOCIETY

The regular monthly meeting of the Issaquena-Sharkey-Warren Counties Medical Society was held at the Mississippi State Charity Hospital, Vicksburg, September 8, and after a supper served at 7:00 p. m., was called to order by the president, Dr. T. P. Sparks, Jr., with seventeen members and seven guests present.

Papers and Discussions: Dr. A. Street, Vicksburg, Chairman.

1. Infections of the Hand.—Dr. J. Gould Gardner, Columbia, exchange essayist from the South Mississippi Medical Society.

Discussed by Dr. B. B. Martin, Jr. Dr. Gardner closed.

2. Incidence of Carcinoma of the Cervical Stump Following Sub-Total Hysterectomy.—Dr. J. A. K. Birchett, Jr., Vicksburg.

Discussed by Drs. R. A. Street, Jr., J. Gould Gardner, and B. B. Martin, Jr., Dr. Birchett closed.

3. Special Case Report From the Mississippi State Charity Hospital—Comminuted Fracture of the Tibia and Fibula, with Autopsy Report.—Dr. Walter E. Johnston.

The next meeting of the society will be held October 13 and the subject will be Radiology. The committee in charge consists of Drs. P. S. Herring, chairman; W. C. Pool; D. A. Pettit. Program: 1. Carcinoma of the Cervix and Radium Irradiation.—Dr. M. L. Flynt, Meridian, exchange essayist from the East Mississippi Medical Society.

2. Roentgen Therapy in Breast and Pelvic Malignancies.—Dr. K. O. Stingily, Meridian.

3. Diagnosis of Urologic Conditions.—A Motion Picture (Courtesy of the Winthrop Chemical Company).—Presented by Dr. Walter E. Johnston.

TALLAHATCHIE COUNTY MEDICAL SOCIETY and CHARLESTON HOSPITAL STAFF

The Tallahatchie County Medical Society met in regular monthly session, at Tutwiler, Thursday evening at 7:30 o'clock in Dr. J. G. Backstrum's office. Those present were Drs. Bardwell, Powell and Moody of Charleston, Dr. J A. Harris of Webb, Drs. Lacy and J. D. Biles of Sumner, Drs. Clay and Backstrum of Tutweiler and Dr. G. C. Denson of Vance. Dr. Pate, a popular dentist of Tutwiler, was a guest of the society.

At 7:45 the doctors were directed to the Backstrum Hotel where a sumptous duck supper had been prepared. It was a real feed; I was fearful some of the participants would have to call one of their fellows to administer unto them during the night but I have not heard of any casualties so far.

Dr. T. F. Clay was the host, the ducks served were from his flock. They showed evidence of a keeper who was liberal with feed.

Dr. G. C. Denson, Vance, has invited the society to Vance several times for a duck supper and we bring the ducks. His invitation was always rejected.

After supper the party returned to Dr. Brackstrum's office where some discussions, on various diseases and experiences of the different physicians were very interesting.

At the close of the meeting a medical staff was organized for the Charleston Hospital. Dr. J. W. Moody, Charleston, was elected president, Mr. D. G. Bardwell, Charleston, vice-president and Dr. J. E. Powell, Charleston, secretary.

The next meeting place of the medical society and hospital staff will be in Charleston, October 1.

J. W. MOODY
Charleston, Sept. 4, 1936.

TRI-COUNTY MEDICAL SOCIETY

A meeting of the Tri-County Medical Society was held at Monticello, Tuesday, Sept. 8. The program was as follows:

Dinner—Riverside Hotel 12:30 p. m.

A Discussion of the Surgical Mortalities Occurring in a Series of One Thousand Consecutive Patients.—Willard H. Parsons, M.D., Vicksburg.

Goitre and Heart Disease.—R. C. Massingale, M.D., Brookhaven.

Pyelo-Cystitis.—A. B. Harvey, M.D., Tylertown.

Diabetes.—W. L. Little, M.D., Wesson.

R. B. ZELLER,
Hazlehurst, Sept. 3, 1936. Secretary

CLARKE COUNTY

Health conditions in this county have been good during the month. A number of cases of malaria have developed, but other than that there has been very little sickness. Of course, we find the usual number of chronic cases. These we have with us continually. Recently a case of poliomyelitis developed near Quitman which threw a considerable scare among the people here. This was a mild case and a diagnosis was not made at once. It increased the business of the drug stores considerably. They could not keep atomizers and spray material on hand for a few days. We are hoping that no other cases develop here.

Dr. G. C. Carlson left here August 24 to begin his internship at the Baptist Hospital, Memphis, Tenn. Dr. Carlson in interested in his work, very conscientious, and we predict for him a very successful career as a physician.

The weather has been very propitious for the harvesting of the cotton crop. People are very busy picking and ginning the fleecy staple which is bringing a good price. We have three gins here and they are being kept busy. Guess a good many obligations will be taken care of, yes, even some doctor's bills.

G. E. GODMAN,
Quitman, Sept. 5, 1936. County Editor

COPIAH COUNTY

Dr. J. C. McGuire, Hazlehurst, is convalescing from a recent mastoidectomy.

Dr. C. R. McKee, Hazlehurst, with his family, was a recent visitor to the Texas Centennial.

Dr. Oscar Eubanks, Crystal Springs, has equiped his office with an x-ray unit.

Drs. N. R. Fairfax and J. R. Markette, Brookhaven, attended the meeting of the Central Medical Society, Sept. 1, to hear Dr. Evans and Kostmeyer.

R. B. ZELLER,
Hazlehurst, Sept. 3, 1936.

DESOTO COUNTY

There are a number of physicians in the state who have sons associated with them in practice. I mention some; there are no doubt others. They are:

Drs. A. L. Emerson, and Charles Whitley, Hernando.

Drs. Harvey F. Garrison, Senior and Junior, Jackson.

Drs. J. A. K. Birchett, Senior and Junior, Vicksburg.

Drs. E. E. Robinson, Senior and Junior, Meridian.

Drs. S. L. Brister, Senior and Junior, Greenwood.

Drs. B. B. Martin, Senior and Junior, Vicksburg.

Drs. W. W. Hall and Toxey, Shelby.

Drs. James W. Eckford and John Featherston, Starkville.

Drs. L. C. Feemster, Senior and Junior, Tupelo.

Drs. J. R. Hill and Stanley A., Corinth.

Drs. John Darrington and Gilruth, Yazoo City.

Drs. A. J. McIlwain and S. T., Batesville.

Drs. Sydney W. Johnston and Hugh H. and Walter E., Vicksburg.

Dr. James D. Biles and J. D., Jr., and Geo. L., Sumner.

There are physicians having sons practicing in other points in the state and elsewhere:

Dr. J. W. Lucas, Moorhead, has a son, John F., in Greenville.

Dr. Charles M. Murry, Ripley, has a son, Vance, in Greenville.

Other names can be added to this list. Likewise, there are doctors' sons who have not completed their curriculum or hospital service. It is very gratifying to a father for his son to follow him in the beloved work of alleviating and curing the ills of mankind.

The outlook for the doctor is encouraging. Crops are good as is the price for the farmers' produce. It is our fervent hope that the physician will collect well.

L. L. MINOR,
County Editor.
Route 4, Memphis, Tenn.,
Sept. 7, 1936.

LEFLORE COUNTY

Dr. John B. Elliott, New Orleans, La., was a visitor to Greenwood on Sunday, Aug. 9. He is spending his vacation this summer at Highlands, N. C.

Dr. F. M. Sandifer, Jr., New Orleans, is spending his vacation in the home of his parents, Dr. and Mrs. F. M. Sandifer. He also went to Dallas to the Fair.

Mrs. Wm. Hicks, Isola, daughter of Dr. and Mrs. F. M. Sandifer, was a patient at the Greenwood Leflore Hospital, recently, for an appendectomy. She is now convalescing at the home of her parents.

Mrs. L. B. Otken, Mary Frances and Luther B., Jr., have returned from Charleston, W. Va., Mrs. Otken's former home. Miss Emily Jane Otken who has been attending Camp Junaluska, N. C., also returned. Dr. Otken will go **dove hunting** for his vacation.

Miss Dot Denman, daughter of Dr. and Mrs. W. E. Denman, has returned from Montreat, N. C.

Dr. W. A. Burkhalter, Greenwood, who graduated at Tulane in 1889 and who has practiced medicine in Greenwood over 40 years, died at his home here Sunday morning, Aug. 30 and was buried from his home Aug. 31 in the Odd Fellows cemetery at this place. He made a specialty of the eye, ear, nose and throat. For several months he has not been able to attend his office on account of chronic arthritis. Before his death he sold his office equipment to Dr. J. C. Pegues, Greenville.

We are glad to welcome Dr. and Mrs. Pegues and their three children to our city. They will live at 600 Bell Avenue in North Greenwood. The doctor wil have his office at 301 Howard St., **upstairs** and will limit his practice to diseases of the eye, ear, nose and throat. He was formerly associated in Greenville, with the Gamble Brothers and Montgomery Clinic.

Dr. Eugene M. Murphey, Macon, is visiting his son Mr. C. H. Murphey, Itta Bena.

The time of meeting of the staff of Greenwood Leflore Hospital has been changed to the first Thursday night in each month at 7:30 p. m.

W. B. DICKINS,
County Editor
Greenwood, Sept. 3, 1936.

OKTIBBEHA COUNTY

The doctors of Oktibbeha and Clay County have been enjoying the lectures on obstetrics given by Dr. Maxwell E. Lapham. He is giving his last lecture on the 9th instant at eight o'clock.

Miss Marie Long, daughter of Dr. F. B. Long, who has recently completed her course in the nurses training school at the Baptist Memorial Hospital, Memphis, Tenn., is now associated with her father at the Oktibbeha Hospital.

Our county health officer, Dr. J. F. Eckford, reports one case of polio. Yes, we are all spraying, or at least a few of us.

Dr. J. W. Crumpton, the oldest practicing physician in the county (fifty years), reports a lot of malaria in and around Sturgis.

Dr. W. E. Murphy, Sturgis, who has been away in a hospital for several months recuperating, is now at home entirely well.

Dr. and Mrs. W. B. Harpole, Jackson, visited relatives and friends in Maben last week-end.

Hunter Scales, Jr., son of Dr. H. L. Scales, who has been in a Memphis hospital with a badly infected hand is now back home much improved.

Miss Sarah Ellis Barr, Jackson, spent last week-end with her parents. Dr. and Mrs. F. E. Barr.

Dr. O. W. Roberts, whose health has been poor for several years, is now able to be out and is doing some practice.

The other doctors in the county are well, good crops are reported and we are all optimistic and able to say "The depression WAS bad."

F. B. LONG

Starkville, Sept. 3, 1936.

TALLAHATCHIE COUNTY

Mrs. Bardwell, Mrs. Ned Rice, Mrs. Isaac Sayle, Miss Elenor Bardwell and Master Gene Sayle have returned from a three weeks' tour through California, Mexico, Utah, the Texas Centennial and many other places of interest. They reported having driven more than seven thousand miles.

Dr. J. E. Powell and his family were recent visitors to the Texas Centennial, New Orleans, the gulf coast and many other places of interest.

Dr. J. E. Powell was a visitor in Memphis this week. While there he visited his daughter who lives in Memphis.

Dr. G. C. Denson, Vance, has been on the sick list for a couple of weeks. He was able to attend the meeting of the medical society Thursday night but was unable to remain long. Dr. Denson would have to be very sick to miss the meetings as I do not recall his being absent a single time since the society was organized some two or three years ago. The society would suffer a great loss in Dr. Denson. He always has something interesting to tell us.

Mrs. W. W. Gunn, Mrs. J. E. Powell, Mr. Jeff Wolf, Mrs. Moody and I attended preaching at Ruleville, Sunday morning, the Chinese Mission services, conducted by Rev. Eddington, at Cleveland at 2:30 p. m., drove to Drew, enjoyed a good supper with Dr. J. A. Maxwell, attended preaching at 8 o'clock and returned to Charleston, arriving at 10:20 p. m.

Dr. W. E. Jenkins, who is somewhere around eighty years old and who has practiced medicine, in this county for many years, has been confined to his home for several months. We wish for him a speedy recovery.

Dr. T. B. Harrison, who has been unable to do any practice for several years on account of his age and the almost complete loss of his sight, is able to go to his office and visit among his folks. Dr. A. C. Harrison, a younger brother of Dr. T. B. Harrison, who has been associated with him in his practice for a number of years, continues the practice carried on for nearly a half century by Dr. T. B. Harrison.

Cotton is moving rapidly. Two gins, located in Charleston are operating day and night, each ginning more than a hundred bales daily. Prices are very good and since the crops were made at a low cost the physicians are hoping to get in some of their accounts. The dry weather has cut the cotton crop about 25 per cent and the corn crop about 60 per cent.

J. W. MOODY,

Charleston, Sept. 4, 1936.

County Editor

TIPPAH COUNTY

The doctors of this territory had a great opportunity last month when Dr. Strong delivered a week's lectures on pediatrics in New Albany. About half of our members were there most of the time. It speaks well for those who are responsible for such courses and also for the ones who attend. Dr. Strong also made a number of visits with local doctors to special patients, and his services were of great value and much appreciated.

Blue Mountain College, which opens next week, announces that Dr. Esther Hancock has been secured as physician and that she will inaugurate a general health program. In addition, she will teach bacteriology and hygiene. We welcome Dr. Hancock to our county and take off our hats to the college for the forward step it has taken.

Owing to lack of appropriation by our county, we have lost the services of the county nurse, which we have had for almost two years and have been of much value.

The quarantine on children under fifteen has been lifted and schools will open soon, some next week and others the week following.

Mr. and Mrs. Ellis Murry of Willoughby, Ohio, have been visiting Mrs. T. L. Randolph, Ripley.

Dr. and Mrs. R. M. Adams had a visit recently from their fine grandson, and incidentally, his parents, Dr. and Mrs. W. M. Adams.

Mrs. Hubert Clemmer of Milan, Tenn., and son are in Ripley to the delight of friends and relatives.

Kenneth McDougal of Bowdoinham, Maine, is visiting in the home of Dr. and Mrs. J. E. Tate and expects to go from here to Mississippi College where he will study this year. The Tates are also enjoying a visit from Miss Jewel Wood, R.N., who formerly was with Dr. Tate in his office. Miss Tate has for some time been stewardess on one of the Great Western Air Lines and her friends are expecting her to narrate some interesting experiences.

Miss Mary Miller Murry has gone to Wesson where she will teach in the Copiah-Lincoln Junior College.

Dr. A.V . Murry married Miss Irene Stovall of New Orleans, La., July 8. After a few days' outing they moved to Greenville where Dr. Murry is associated with the Gamble Brothers and Montgomery Clinic.

C. M. MURRY,
County Editor.

Ripley, Sept. 9, 1936.

TISHOMINGO COUNTY

Dr. W. E. McRae is in a Memphis Hospital for a minor operation. We hope he will soon be well and return to his practice.

Our County Society met with Alcorn and Prentiss County Societies this week and discussed quite at length the idea of establishing a tuberculosis hospital in this part of the state.

Dr. R. J. Brown has just returned from the national shoot at Vandalia, Ohio, and reported a very enjoyable time and a large attendance at the shoot.

Dr. D. D. Johnson and family are taking a short trip at present in Texas and other western states.

Mrs. A. E. McDaniel, a former public health nurse, spent the week in Iuka and Tishomingo County visiting among her many friends all of whom were very glad to see her.

We feel like the wave of epidemic poliomyelitis has passed us as we have had no onset of new cases in twenty days or more in Tishomingo County.

T. P. HANEY,
Iuka, Sept. 4, 1936. County Editor

WARREN COUNTY

"A wise traveler never despises his own country," so Dr. I. C. Knox and family in their summer vacation traveled for two or more weeks in the "Great Wide West," visiting "Pike's Peak," "Yellow Stone Park," "Grand Canyon," etc.

Dr. Tom Sparks in the discharge of official duties, spent some two or more weeks at Camp Beauregard during the month of August as camp physician to the National Guard, encamped there.

Someone has said, "A little learning is a dangerous thing, drink deep or touch not the Pierian Springs," etc. So Laurence J. Clark being a very conscientious young doctor, decided he needed to imbibe several gallons more from some old spring of knowledge and betook himself to Rochester for some two or more weeks during the month of August. Laurence says he found out one thing on this trip, that is, they have entirely abandoned the "old free drinking trough" formerly attached to the Spring of Knowledge and have installed a "breast pump" that required a stalwart baby to operate and that each "kid" has to pull that mental nutriment through for himself by his own indomitable will and effort.

Drs. B. B. Martin, Jr. and F. M. Smith were the only doctors from Vicksburg, attending the September meeting of the Central Medical Society. Dr. Scudder was one other from the Issaquena-Sharkey-Warren Counties Medical society in attendance. The lectures presented on this occasion by Dr. Evans on "Poliomyelitis" and Dr. Kostmayer on "Endocrine Therapy" were distinctive. Those fellows over at Jackson who are directing the "Central Medical," put on a "good show" for **amateur actors.**

Dr. Killellfer has recently been assigned to the CCC camps at Vicksburg. His work will somewhat lessen the work of Dr. Sapp.

The many friends of Dr. I. C. Knox extend sympathy to him in the recent loss of his brother.

Long years ago Ovid said, "Take rest. A field that has rested yields a bountiful crop." So one week in August our editor took a week's rest, slept out under the stars, listened to the dulcet murmur from the river of running waters that flow eternally to the sea. However, our effort to furnish a "bountiful crop" in this letter has been rather lost.

H. T. IMS,
Vicksburg, Sept. 4, 1936. County Editor

WASHINGTON COUNTY

Dr. and Mrs. T. B. Lewis, Greenville, have returned from a visit to their daughter, Mrs. Jimmy Franklin, Jackson. They also spent a few days on the Mississippi Coast.

Dr. and Mrs. C. P. Thompson, Greenville, have returned from Hot Springs, Ark., where they spent two or three delightful weeks.

Dr. and Mrs. Otis Beck and children, Greenville, have returned from Chattanooga, Tenn., where they visited friends and relatives.

The many friends of Dr. D. C. Montgomery, Greenville, are delighted to know he has completely recovered from his injury.

Dr. and Mrs. P. G. Gamble and children, Greenville, have returned from an extensive eastern trip.

Dr. and Mrs. H. A. Gamble and son, Lyon, Greenville, are enjoying a vacation at their summer home in Wisconsin.

Miss Dorothy Sanders spent a week with her parents, Dr. and Mrs. J. S. Sanders, Leland, before going to St. Luke's Hospital in Chicago where she will complete her nursing course.

The many Greenville friends of Dr. and Mrs. J. C. Pegues and family regret very much that they have recently moved to Greenwood.

Dr. J. A. Beals and son Tom, Greenville, left recently for North Carolina where Tom will enter camp for football training before returning to Georgia Military Academy.

Dr. Charles Berry, Greenville, spent a few days in his home town, Senatobia, recently.

Dr. E. L. Fuller, Greenville, has recently been appointed city physician.

The many friends of Dr. A. J. Ware, Greenville, are delighted to know he is improving and will soon be able to be out again.

JOHN G. ARCHER,
County Editor
Greenville, Aug. 3, 1936.

WINSTON COUNTY

Dr. H. B. Watkins, Noxapater, county health officer, was in the city discussing the opening of schools in the county and recommended the opening of all county schools conditioned on all children being sprayed against poliomyelitis.

The trustees of the city schools decided to defer opening of the city schools until September 21.

The few doctors who were very anxious in the political campaign have quieted down; some are elated over the outcome, and others disappointed.

Dr. T. C. Suttle was in the city this week.

The doctors are out trying to collect as cotton is marketed; they are the forgotten men unless they go after them.

M. L. MONTGOMERY,
County Editor
Louisville, Sept. 4, 1936.

HOSPITAL STAFF TRANSACTIONS

COAHOMA COUNTY MEDICAL SOCIETY AND CLARKSDALE HOSPITAL STAFF

The Coahoma County Medical Society and the Clarksdale Hospital Staff were called to order in the Clarksdale Hospital, Sept. 9, 1:30 p. m., by the president, Dr. J. A. Slack. He ordered the secretary to read the minutes which were adopted as read.

A case report of "A Permanent Urinary Carrier of Typhoid Bacilli" was then presented by Dr. N. C. Knight which was discussed fully by all members present.

A round table discussion of the use of the

U. S. P. H. S. spray for infantile paralysis was then entered into by all members present and it was generally agreed that the use of the spray would be recommended to the general public, with the possible exception of asthmatic or allergic patients, by the members of the Society.

A round table discussion of future programs and activities of the Society was then had and it was agreed that programs in the future would consist of one volunteer paper each time, and case reports by anyone having interesting cases to report. Also it was agreed to have a visiting essayist occasionally and on such occasions a committee would be appointed to work up the attendance.

Dr. E. L. Wilkins then made a motion that a committee be appointed to investigate the practicability of having luncheon-meetings instead of afternoon meetings. Motion duly seconded and carried. The president appointed Drs. Wilkins, Knight and Levy on the committee.

Election of officers being the next order of business Dr. E. L. Wilkins made a motion, which was duly seconded and carried, that the present officers continue in office until January 1, 1936. They are: President, J. A. Slack, Friars Point; Vice-President, T. G. Hughes, Clarksdale; Secretary-Treasurer, N. C. Knight, Clarksdale.

N. C. KNIGHT, Secretary.

Clarksdale, Sept. 10, 1936.

ABSTRACT: A PERMANENT URINARY CARRIER OF TYPHOID BACILLI

Dr. N. C. Knight

PATIENT.—Colored, male, age 50; address Coahoma County.

CHIEF COMPLAINT.—Continued fever, abdominal pain, headache, nose bleed, weakness, loss of appetite, feeling badly.

ONSET.—About July 1, 1935; first visit July 18, 1935; history of contact with case or carrier, negative.

HISTORY OF ILLNESS.—Typical of an uncomplicated case of typhoid fever. Convalescence uneventful. Recovery complete insofar as evident physical disability concerned.

DIAGNOSTIC LABORATORY WORK: July 18, 1935—Agglutination test for typhoid fever, positive. Agglutination tests for paratyphoid A and B and undulant fever, negative. Blood culture, stool culture and urine culture, negative.

July 24.—Stool culture, negative. Urine culture, negative.

July 30—Stool culture, negative. Urine culture, positive.

SUBSEQUENT.—Stool and urine cultures taken over a 13 months' period showed the patient to be free of typhoid bacilli in the gastro-intestinal tract but still excreting bacilli via the urine. He is thus a potential spreader of typhoid fever. He has been classified as a permanent carrier of typhoid bacilli and is under constant supervision of the health department.

In routine epidemiological investigation of this case to determine the source of infection cultures were taken from the other five members of the family. Three showed typhoid bacilli in the urine two different times, four to six weeks after the patient took sick. Clinically they did not have the disease and showed no evidence of illness. None of the three gave a history of any illness at all during the past six months and their past histories were negative for typhoid and other continued fevers. Typhoid vaccine was administered to them, however, in three doses one week apart, the first doses being given five days before any of them showed typhoid bacilli in the urine. The finding of typhoid bacilli in the urines of these three persons was interpreted to mean one of three things, namely, (1) they were all permanent carriers of typhoid bacilli; (2) specimens were being collected in the same container used to collect specimens from the patient and the container was not properly sterilized; or (3) all three were temporary contact carriers but had enough vaccine and natural immunity to protect them from having the disease.

The infrequency of urinary typhoid carries, and especially three in one family, gave little significance to the first consideration. Close investigation made us feel sure that the specimens were being properly collected and this helped to rule out the second consideration. Therefore, the third consideration seems most logical and most likely, namely, that all three had enough typhoid infection to excrete the bacilli through the urine but had enough vaccine to protect them. This, however, was very unusual as repeated stool cultures showed no evidence of bacilli.

Subsequent cultures taken at different times over eleven months have all been negative and the three persons under observation have been dismissed. Stool and urine cultures from two other members of the family were negative.

The bottles in which the stool specimens were placed contained 30 per cent glycerin. Other media used in some of the stool specimen bottles contained 30 per cent glycerine in 0.85 per cent NaCl with 0.5 per cent LiCl added. The urine was also collected at different times in bottles containing two different kinds of media, namely, 1 c.c. of undiluted glycerine, and 0.5 per cent LiCl bile of pH 5.8. The pH is titrated at that concentration because many fecal bacteria die out at that pH but the typhoid organisms are not affected.

CONCLUSIONS.—1. Typhoid fever in this 50 year old negro man resulted in a permanent urinary carrier state. If unsupervised, he will be a menace to his community during the remainder of his life.

2. This serves to emphasize the importance, from a public health standpoint, of closely following up and properly releasing cases of typhoid fever.

3. It is probable that three other members of the family were infected but had enough immunity to protect them.

4. The source of the patient's infection was not determined.

5. This incident also serves to illustrate the necessity for collecting blood, stool and urine specimens for culture from all suspected cases as diagnostic measures since blood and stool cultures were not positive in any instance. It is well known that one blood, stool or urine culture has little diagnostic value when taken alone, but when all are made, at least one will be positive in about 90 per cent of cases.

6. Twenty-seven stool cultures and 30 urine

cultures were made in this investigation.

NORTHEAST MISSISSIPPI HOSPITAL STAFF MEETING

Meeting called to order immediately following dinner by the president, Dr. R. B. Caldwell.

Minutes of last meeting read by secretary, Dr. R. B. Cunningham.

Business.

Report of Committees.

Special case report by Dr. S. L. Pharr followed by discussion of the staff.

Short biography of Dr. C. Jeff Miller by Dr. R. B. Cunningham

Visitors present.—Dr. J. S. Wheeler, Tishomingo; Dr. J. R. Hill, Corinth, ex-president of Mississippi State Medical Association; Dr. B. Patrick, Corinth.

Adjournment.

W. L. FARLEY, R.N.

Booneville, Sept. 14, 1936.

DR. F. G. RILEY'S HOSPITAL

Dr. and Mrs. F. G. Riley and two sons have returned from a three weeks' Caribbean cruise. On their trip they visited in Havana, Cuba, and other points on the island, then to Christobal and Colon, through the canal to Panama City and Balboa. From Panama they spent a day in the interior and on their return trip made two trips in Honduras. All report a most enjoyable vacation with ideal weather during the whole trip.

JONNIE VAN DEVENDER,
Secretary

Meridian, Sept. 11, 1936.

VICKSBURG SANITARIUM STAFF MEETING

A regular monthly meeting of the staff of the Vicksburg Sanitarium was held Thursday, September 10, and after a supper served at 6:30 p. m., was called to order by the President, Dr. J. A. K. Birchett, Jr., with eleven members of the staff present.

Reports from the records department and analysis of the work of the hospital were given consideration.

Dr. F. Michael Smith, director, Warren County Health Department presented a report of vital statistics for the month.

Special Case Reports:

Hyperthyroidism.—Dr. A. Street.

Hodgkin's Disease.—Dr. J. A. K. Birchett, Jr.

Hypertrophic Pyloric Stenosis.—Dr. G. C. Jarratt. Selected roentgen ray studies were demonstrated and discussed as follows: (1) Thorax in Hodgkin's Disease; (2); Thorax for Discussion; (3); Hydronephrosis; (4); Ureteral Kink, Postoperative; (5); Ureteral Calculus; (6); Cholelithiasis.

The next meeting of the staff will be held Monday, October 12, 6:30 p. m.

ABSTRACT: HODGKIN'S DISEASE

J. A. K. Birchett, Jr., M.D.

PATIENT.—White, female, age 27; admitted to Sanitarium August 1, 1936.

CHIEF COMPLAINT.—Fever, rapid loss of weight, and pain in right lower chest.

HISTORY OF PRESENT ILLNESS.—In the first part of January of this year, patient had an attack of sore throat, fever, general prostration of mild degree, associated with pain in the right lower chest, which was accentuated on deep inspiration, and slight cough. Seen in the out-patient department four or five days after onset of the complaint and given the usual treatment for grippe and told to go home and go to bed. On Jan. 14, she returned complaining that the pain was more severe and that she was having night sweats and fever every afternoon. The cough was better. Roentgen ray studies were made at that time because of the presence of many rales and there was an opacity noted in the lower right chest. The patient continued to have pain and fever with general weakness and prostration. There was a positive history that she had had contact with a tubercular member of the family, so it was thought that we might possibly be dealing with a case of pulmonary tuberculosis. Sputum was examined, which was scanty, but we did not find any evidence of any tubercular infection. Several D'Amato tests were done and these proved to be negative. The patient was kept under observation with slight or no improvement and it was thought advisable to bring her to the Sanitarium for hospitalization and observation. Feb. 7 she was admitted to the hospital and remained under treatment and observation for 14 days. With rest in bed, the temperature did not go over 100°F. at any time and, on the tenth day, the temperature was normal. As she had large cryptic tonsils, from which liquid pus could be expressed, it was thought that possibly she might be getting some absorption from this area and, therefore, a tonsillectomy was done under general anaesthetic without undue disturbance. However, six days after going home, she had a postoperative hemorrhage and she came back to the hospital where calcium was given and the bleeding stopped. Repeated examination showed no evidence of any active lung infection. The urine was normal. The blood was negative for undulant fever, typhoid fever and paratyphoid fever. Blood culture was negative. Therefore, advised to go home and take plenty of rest and to eat a diet of high caloric value, as we still suspected that she was a tubercular individual. Three weeks after last being seen by us, the patient went to the State Sanatorium for a complete check-over and no evidence of tuberculosis was found. It was thought that possibly she had undulant fever as she still continued to have sweats and run high afternoon temperature. There was also some suggestion, that is, a possibility, that the opacity in the right lung might be malignant. After being discharged from the Sanatorium, she again returned home, continued to lose weight and strength and the high temperature continued. She presented herself to another clinic in this city for examination and was hospitalized for several weeks, with no definite evidence of improvement and the true cause for the fever was not found. About the first of June, the patient had an exploratory laparotomy for the cause of the pain in the upper abdomen which had been getting more and more severe and nothing of special note was found, except that the liver contained several granular areas. One of these was taken for biopsy and the diagnosis was made of granuloma, but no definite characteristic. Aug. 1, the patient again presented herself at this clinic for observation.

PAST HISTORY.—In 1934 this patient presented herself to us complaining of pain in the lower left quadrant of the abdomen and backache for the preceding six years. Physical examination at this time in brief showed a left ovarian cyst and a marked retroversion of the uterus, with ulceration of the cervix. In October, 1935, the pain had become so severe, although it had been a year since she had been advised to have an operation for retroversion and ovarian cyst, that the patient came back for surgical relief of this disturbance and the Gilliam suspension of the uterus was done. The appendix and a large non-hemorrhagic ovarian cyst were also removed. Patient was discharged on Nov. 15, 1936. She was seen several times in the office after this and she had complete relief from her symptoms and had begun to gain weight and strength.

PHYSICAL EXAMINATION.—The physical condition on admission Aug. 1, showed a very thin, poorly-nourished individual, quite a contrast to what was noted on her last admission, as she had at least lost 30 to 40 pounds. The examination was essentially negative. There was a recent right rectus abdominal scar. The skin was very dry and there were palpable glands over the entire body, especially in the inguinal and cervical regions. At the time of admission the temperature was 103°F. and a little while before entering the hospital the patient had had a rigor. With a history of prolonged, fever, loss of weight, and general prostration, and with the non-evidence of any other infection to account for this syndrome and with the evidence of enlarged glands, it was thought that we were possibly dealing with a Pel-Ebstein syndrome and Hodgkin's disease, and a tentative diagnosis of such was made until a gland could be removed for biopsy. Aug. 3, a gland was removed from the right cervical region and Dr. Lippincott reported Hodgkin's disease.

TREATMENT.—The patient has been subjected to a generalized series of deep x-ray therapy until she has received, in some regions, approximately an erythrmatous dose. Aug. 25, all of the glands had receded. The temperature has been normal and patient is feeling much better, as she is able to take and retain nourishment and to be up and about in a wheel chair. Her strength is being gradually regained. A radiograph taken Aug. 25 showed the mediastinal glands, which had been noted from the outset of the disease as being enlarged, are no longer evident.

COMMENT.—This case shows conclusively how the etiology of a disease may be masked for some time until the most characteristicly involved tissue manifests itself so that the proper examination can be made. It was impossible to make a positive diagnosis without having the tissue to prove it. It was our good fortune to find glandular enlargement at the second admission of this patient to the Sanitarium, as I feel perfectly satisfied that there was no evidence of any glandular enlargement at the time of her first admission, and without the evidence of glandular enlargement, it would have been hard to say that this patient had a Pel-Ebstein syndrome or Hodgkin's disease, even though there was evidence of enlarged mediastinal glands. As to the success of the type of therapy that was used, it is rather interesting to know the favorable reports that are appearing in the literature as to the effect of deep x-ray therapy in Hodgkin's disease. Leuceutia of Detroit collected 2,425 cases of Hodgkin's disease from the literature. He states that in Hodgkin's disease radiation therapy, besides leading to a great symptomatic improvement, increases the duration of life in the average case from two to three and one-half years. It produces a five-year survival in 15 to 33 per cent of the cases —a ten-year survival in 8 per cent and, in certain instances, provides a cure.

ABSTRACT: HYPERTROPHIC PYLORIC STENOSIS, G. C. Jarratt, M.D.

PATIENT.—White, female, age 7 weeks, seen in out-patient department Aug. 21, 1936.

CHIEF COMPLAINT.—Vomiting, constipation and loss of weight.

HISTORY OF PRESENT ILLNESS.—Mother stated that for past three weeks there had been vomiting, projectile in type. At first there was only occasional vomiting but for the past two weeks infant would sometimes take two or three feedings without vomiting and then vomit all of the previous two or three feeding. Seemed uncomfortable until vomited and mother had noted peristaltic movements in upper abdomen. Seems hungry all of the time. Constipated and enemas and laxatives given to produce stool. Stools scant, dark green and contained mucus. Has lost one pound in weight during the past two weeks.

BIRTH HISTORY.—Normal cephalic delivery without forceps; no cyanosis; weight 8½ pounds.

FEEDING HISTORY.—Breast irregularly every two hours.

PHYSICAL EXAMINATION.—Well developed but poorly nourished infant. Temperature 101°F.; weight 9½ pounds. Peristaltic wave from left to right in upper abdomen on tapping abdomen gently and following the giving of 2 ounces of sterile water. No pyloric tumor palpated at this time.

CLINICAL LABORATORY.—Blood: hb. 77%, erythrocytes 3,670,000; leukocytes 12,100; coagulation time 3 minutes; lymphocytes 49%, polymorph. neutrophils 48%, eosinophils 2%, basophils 1%. Urine: normal.

TREATMENT.—Put to breast at 6 a. m., 9 a. m., 12 noon, 3 p. m., 6 p. m., 10 p. m., and 2 a. m. Given 1/1000 grain of atropine sulphate by mouth fifteen minutes before each feeding; given 1/8 grain of sodium luminal by mouth fifteen minutes before the 6 a. m., 12 noon, and 6 p. m., feedings. Given 250 c.c. of 5% glucose solution in normal saline intraperitoneally.

PROGRESS.—Aug. 22: Nurses well but vomits following each feeding; projectile in type. Given 100 c.c. of 5% glucose solution intravenously; 1/500 grain of atropine sulphate before each feeding. Physical examination shows no change and no pyloric tumor can be palpated.

Aug. 24: Still projectile vomiting following each feeding. Definite peristaltic wave from left to right in upper abdomen. Can palpate small tumor mass in upper abdomen, size of almond, one inch to right and one inch above umbilicus. Given 275 c.c. of normal saline solution intraperitoneally. To operate in A. M.

Aug. 25: Before operation, give 125 c.c. of 5% glucose solution intravenously; lavaged stomach with distilled water.

OPERATIVE FINDINGS.—Pylorus one inch by 3/4 inch diameter, cartilaginous in consistency. No lumen can be made out. Fredet-Rammstedt technic used.

Give ½ ounce double strength breast milk every two hours with medicine dropper, beginning three hours after operation; 1/8 grain of luminal before 3 p. m., 9 p. m., 3 a. m., and 9 a. m. feeding.

Aug. 26: Taking formula; no vomiting. Feedings increased to one ounce double strength breast milk at two hour intervals. Given 75 c.c. of whole citrated blood intravenously.

Aug. 28: Put to breast at 6 a. m., 9 a. m., 12 noon, 3 p. m., 6 p. m., 10 p. m., and 2 a. m., for fifteen minutes at each feeding.

Sept. 1: Blood: hb. 82%; erythrocytes 3,500,000; leukocytes 3,400; lymphocytes 61%, polymorph neutrophils 34%, eosinophils 4%, basophils 1%.

SUBSEQUENT PROGRESS.—Sept. 8: Has continued to nurse well, no vomiting. Has gained 14 ounces since operation. Wound healed and sutures removed.

HONOR ROLL

The following have contributed to this number of our journal:

SOCIETIES: Central Medical Society, Harvey F. Garrison; Issaquena-Sharkey-Warren Counties Medical Society; Tallahatchie County Medical Society, J. W. Moody; Tri-County Medical Society, R. B. Zeller; Coahoma County Medical Society, N. C. Knight; Third District Health Officers Society, L. B. Austin.—6.

COUNTY NEWS: Clarke, G. E. Godman; Copiah, R. B. Zeller; Desoto, L. L. Minor; Leflore, W. B. Dickins; Oktibbeha, F. B. Long; Tallahatchie, J. W. Moody; Tippah, C. M. Murry; Tishomingo, T. P. Haney; Warren, H. T. Ims; Washington, John G. Archer; Winston, M. L. Montgomery.—11.

HOSPITALS: Clarksdale Hospital, N. C. Knight; Northeast Mississippi Hospital, W. L. Fraley, R.N.; Dr. F. G. Riley's Hospital, Jonnie Van Devender; Charleston Hospital, J. W. Moody; Vicksburg Sanitarium.—5.

OTHERS: Mrs. W. L. Little; Henry Boswell; Daniel J. Williams; S. E. Eason; N. C. Knight.—5.

GRAND TOTAL.—27.

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ESSAY CONTEST

The following letter has been sent to all presidents and councilors so far as they are known:

Cary, Mississippi
September, 1936

Dear Co-Worker:

The Woman's Auxiliary to the Mississippi State Medical Association in its health program is making a great effort to get the people of Mississippi acquainted with the purpose and work of the Mississippi State Preventorium at Sanatorium. With this in view, it is sponsoring a statewide contest and offering a prize of five dollars ($5.00) for the best essay on the subject—**Preventorium.**

Booklets containing information about the Preventorium will be mailed to each school upon request to the Public Relations Chairman. The best essay from each school is to be in the hands of the district councilor or local chairman by December 1st and the best essay from each district is to be forwarded to the state chairman **not later** than February 1st, 1937.

Rules and Regulations of the Contest:

1. All seventh grade pupils are eligible.
2. Use pamphlet material ONLY.
3. Write on one side of paper only (typewritten, double spaced, preferred).
4. Name of school, county and number on paper. No name on papers. Name to be sent in sealed envelope with school, county and number on outside.
5. Essay not to exceed 500 words.
6. Neatness is given consideration.

The judges will examine these papers without knowing who has written them.

The judges will base their decisions on the basis of educational value, public health teaching and the standpoint of a general practitioner.

The envelopes will be opened by the state chairman in the presence of the president and the secreary at the annual meeting in May, 1937, at Meridian.

The Auxiliary, to further acquaint the people of the state about the great work done at the Preventorium, has prepared a little story to be used at chapel exercises, club meetings or for the P. T. A., in fact anywhere. It is suggested that this be given at the close of the essay contest, inviting all friends and members of the different organizations to be present. At this time a free will offering should be taken and this fund sent to the Preventorium Chairman, Mrs. Henry Boswell, Sanatorium, to be added to the trust fund the Auxiliary is sponsoring for the needs of children at this institution who have no provision made for the little extras that make a child happy and contended.

If I can be of any help to you write me and I will do all I can to help you carry out this program in your locality.

During the month of September, we want to contact all schools so as to get supplies and information to every one by November 1st, the time we want the children to give the essay contest their attention. This will also give us time to complete the contest before the Seal Sale begins.

Remember I want to hear from you.

Very best wishes and kindest regards,

Yours sincerely,
MRS. W. C. POOL,
Public Relations Chairman.

ISSAQUENA-SHARKY-WARREN MEDICAL AUXILIARY

The Issaquena-Sharkey-Warren Medical Auxiliary held its first meeting after the summer months on Tuesday the 15th at the Hotel Vicksburg.

Dr. and Mrs. John Dent have had a series of parties given in their honor. Among the hosts and hostesses were Dr. and Mrs. Benson Martin, Jr.

Dr. and Mrs. Richard Street are enjoying their vacation which they are spending on the coast.

Mrs. Kendrick Purks entertained the members of her bridge club in their attractive apartment Saturday night.

Dr. and Mrs. Benson Martin, Jr., are planning a most delightful trip by motor to the Texas Centennial.

Mrs. George Street leaves during the week with her attractive daughter, Polly, for Virginia where she enters Hollins College.

Dr. and Mrs. Preston Herring are looking forward to a delightful visit from Mrs. Herring's mother, Mrs. J. C. Greenoe, of Trenton, Missouri.

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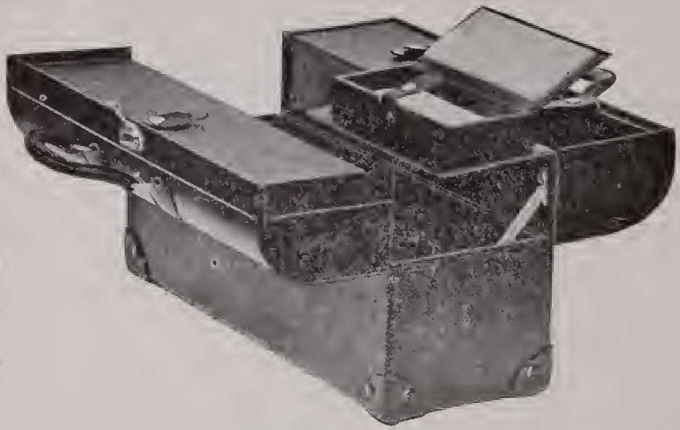

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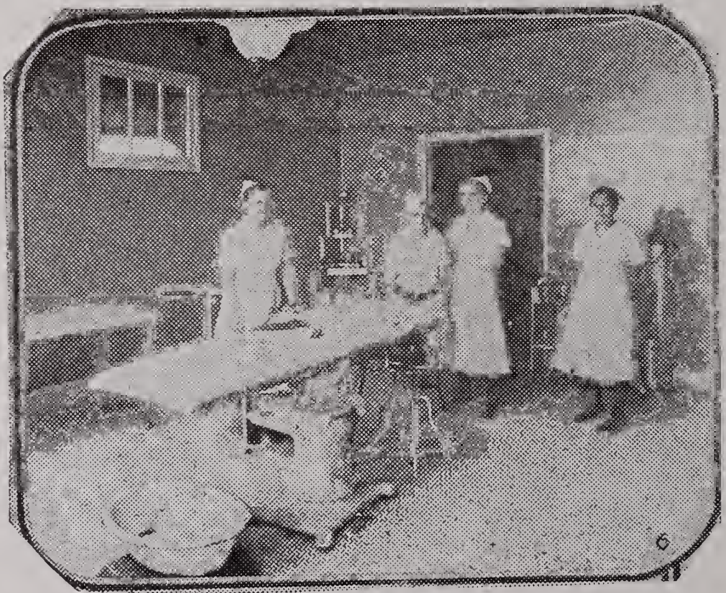

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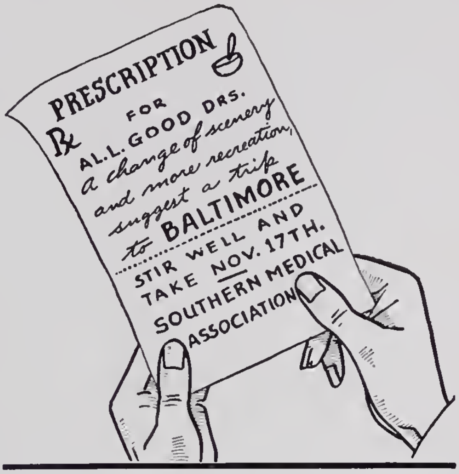

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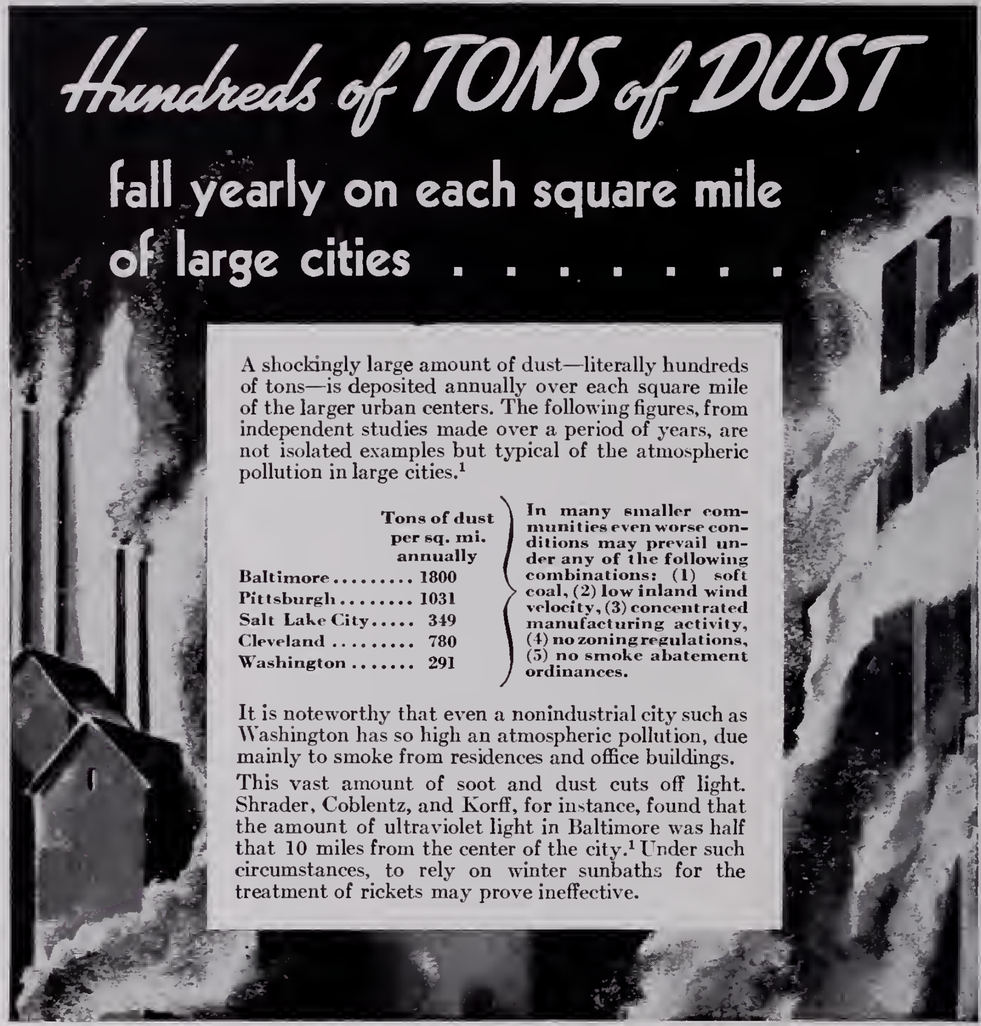
Richmond, Virginia
President, Southern Medical Association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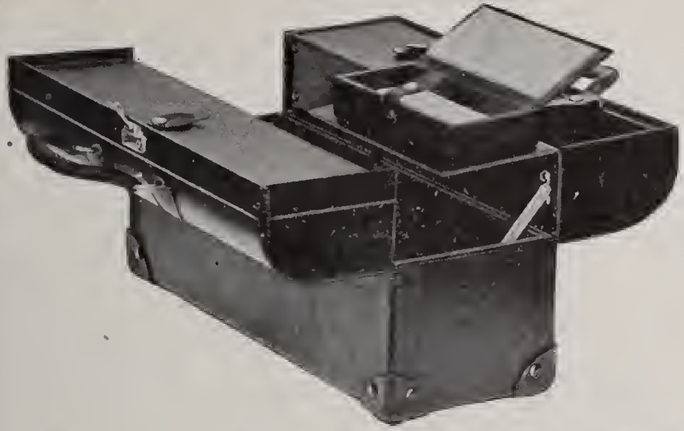

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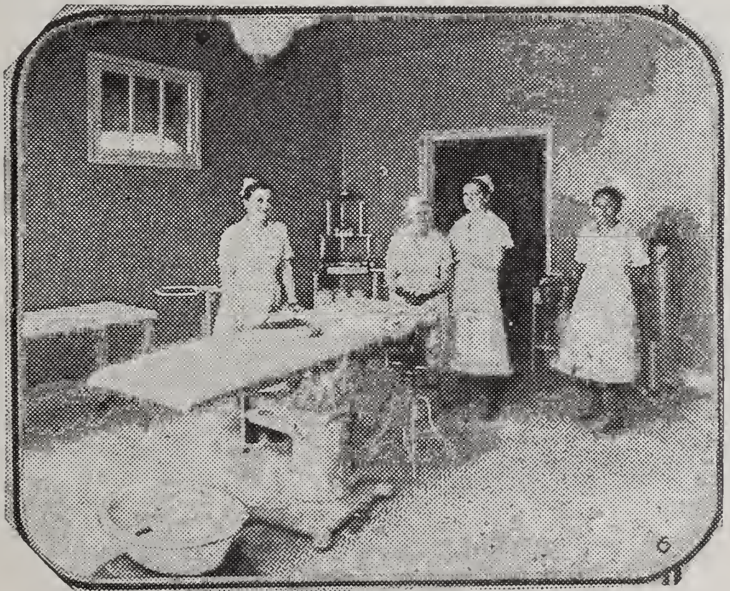

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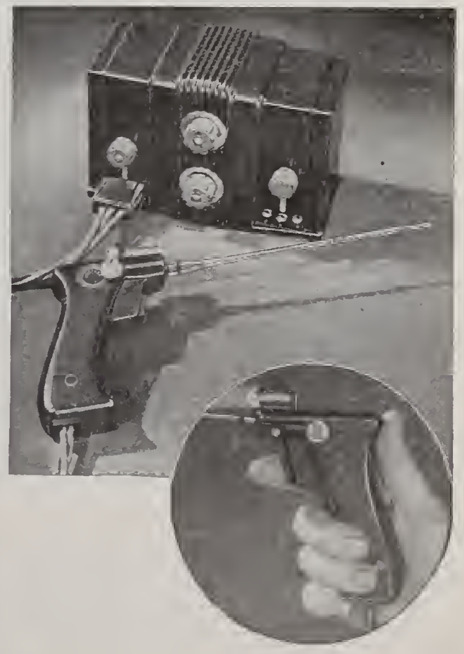

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Plastic Surgery Faces the Future*

C. R. STRAATSMA, M.D.
New York City

I HAVE entitled this paper "Plastic Surgery Faces the Future" because the specialty—which deals with the methods used to correct congenital or acquired deformities by removal, rearrangement, or replacement of tissues—although one of the newer developments in medicine, is destined to play an increasingly important role in surgery.

The profession has always attempted the repair of hare lip, cleft palate, and the grosser functional abnormalities, but now much work is being done to improve the appearance of the part affected as well as the function. And this work is justified, not only from the economic, but also from the psychological standpoint. Improved appearance has enabled many a person to compete more creditably with his fellows in the business world. Rarely does a day go by that we do not have an opportunity of witnessing remarkable psychological transformations as the result of some correction. Neurologists and psychiatrists have likewise recognized this factor and we are frequently called upon by them to correct a deformity which they consider the basis of a mental disturbance. But let me not minimize the importance of surgical restoration of function because that is really the fundamental reason for our being and is today of primal importance. However, since these two phases are most closely interwoven, in repairing function we usually improve the appearance of the part in question.

While the impetus to the recent growth of reconstructive surgery was the World War, still civil life constantly creates circumstances which demand its continuance. Rapid locomotion, industrial injuries (Fig. I), scars and contractures from burns (Fig. II), congenital deformities, and the treatment of malignancies all make supreme demands upon the plastic surgeon. Moreover the economic pressure of civil life today necessitates the prolonging of the individual's business acceptability. And finally public attitude concerning corrective measures affecting appearance alone is now one of approval rather than of condemnation.

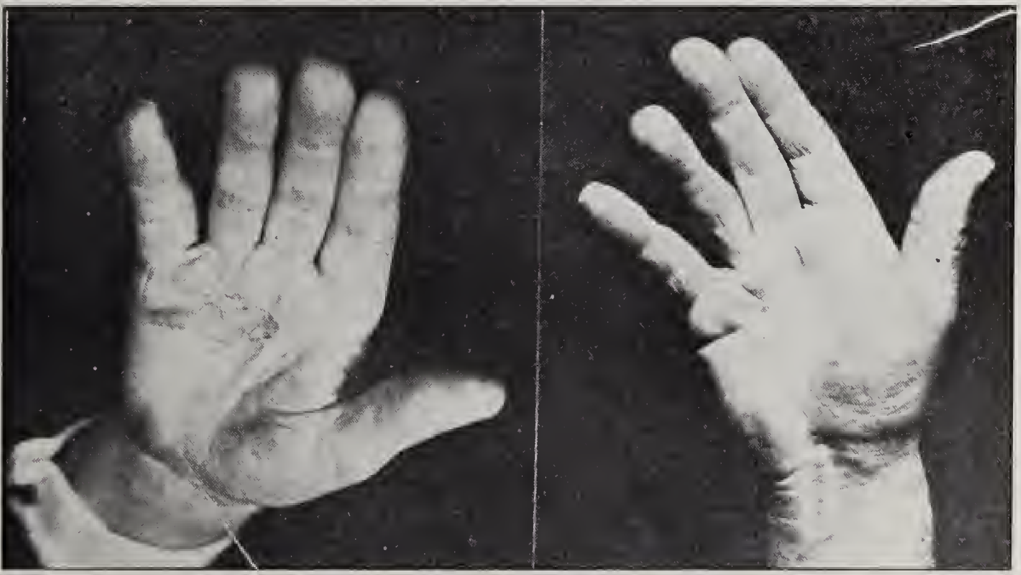

Fig. I

Plastic surgery is daily growing in importance. Medical science is making a healthier race, and when a person feels well he has a desire to look well, so that plastic surgery has naturally followed in the footsteps of medical progress. It is a mistake to consider legitimate cosmetic plastic procedures unworthy of the best efforts of a soundly trained surgeon. Everyone in this audience has perhaps been called upon to do reconstructive surgery at one time or another and many of you practice some phase of this work frequently.

---

*Read before the 52nd annual meeting of the Mid-South Post Graduate Medical Assembly, Memphis, Tenn., Feb. 11-14, 1936.

Obviously, the exposed and movable parts of the body are the chief recipients of this work. These portions include many of the functional essentials, such as the mouth, nose, eyelids, ears and hands, and are therefore when deformed a cause of great disturbance if not an over-whelming handicap. The cancer surgeon of today does not hesitate to radically remove growths on the exposed surfaces because of the ability of reparative surgery to satisfactorily correct the resulting defect. But, though the majority of cases occur on the exposed parts, our work is far from limited to these portions as we are often called upon to loosen and remove contracture scars of the axilla, knee, or other parts of the body.

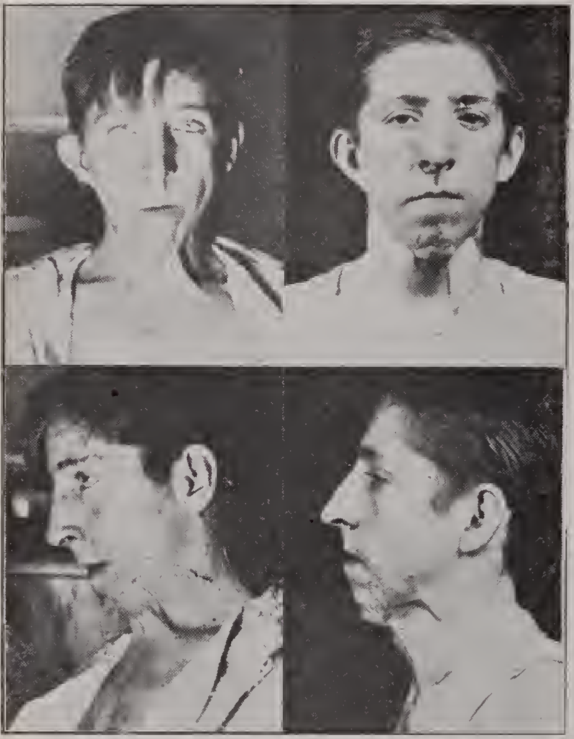

Fig. II

Although the matter of diagnosis may be simpler in reparative surgery than in other branches, nevertheless good results depend largely upon a thorough knowledge of the subject in hand, and an ability to visualize each step as well as the end result. May I now discuss briefly the salient points in dealing with congenital or acquired deformities:

Immediate skin grafting in cases of trauma or in burn cases after the slough has separated saves many painful dressings, shortens the healing time, and lessens the resulting deformity. Though it is still recommended by some that cases in which there has been a large loss of skin either from burns or trauma, be allowed to heal as best they can, even though severe contractures result, before employing plastic surgery, this is decidedly contrary to our experience.

Scars, keloids and tattoo marks are among the common problems of this specialty. Thus far, in our experience it has been impossible completely to remove a scar, but wide, irregular or depressed scars can be made considerably less conspicuous by one or more plastic procedures. One must be cautious in giving too bright a prognosis to people with dark heavy skins because of the complicating typerthrophied scar or keloid which is more likely to occur with that type of skin. In regard to keloid, much improvement has been obtained by the proper use of X-ray or radium before and after excision and resuture. Tattoo marks are handled in two ways, either by excision, or by chemical bleaching of the stain. The latter method is to be advocated only where it is impossible to excise the skin as it leaves a disfiguring scar proportionate to the size of the tattoo mark.

During recent years the criminal has attempted to outwit the law by utilizing various types of plastic surgery. Correction of scars, reshaping of the nose, and alteration of finger tips have been attempted. However, there are many other characteristics such as gait, posture, habit, voice, etc., that identify him, so that the best he can hope for is a slight retardation of his apprehension. The police have on record excellent results of finger print alteration, the best of which still shows sixty-five identifying marks.

The forehead is frequently the site of scars and depressions, usually following automobile injuries or radical frontal sinus operations. Conspicuous scars here are improved by excision and resuture, while the depressions are repaired by the use of cartilage, fat and fascia, or by the dermal graft.

To construct an entire ear challenges the most skilled efforts in this field, but to date our results very nearly approach the normal.[1] Small ears or partial losses offer a simpler task because there is usually some framework on which to build, while the oversized or flop ear is most satisfactorily dealt with by removing excess cartilage and skin and readjusting the ear to the head.

The face, eyelids, chin and lips require much ingenuity in plastic repair. They are frequently the site of small growths, lacerations, and in older persons carcinoma, particularly of the basal cell type, although the squamous cell variety seems to be on the increase. The excision of redundant face skin, or face-lifting is becoming an economic necessity with business women and actresses, who are having this work done to enable them to keep their position a few years longer. (Fig. III) Face-lifting is now a perfectly safe procedure, and its results last several years, depending somewhat upon the thoroughness of the operation. Eyelids are highly amenable to repair and this is exceedingly important for many times the sight has been saved by readjustment of the lids so that they could perform their normal protective function. Again, redundant eyelid skin is frequently removed solely to improve appearance. The undersized chin is usually dealt with by transplanting a piece of bone or cartilage in front of the mandible in order to give it more prominence.[2] In extreme cases the mandible is sawed in two, using double L-shaped incisions, and the anterior fragment is pushed forward. The unusually prominent chin is corrected by removing the excess bone. Many operations have been devised for the correction of the hare lip but it is rather difficult to follow any rule as most of the cases seen by the plastic surgeon are adults in which the primary repair has been attempted—hence it remains for us to improve on the original operation. The flat lip so often seen after the repair of the congenital cleft is corrected in one of two ways, either by a dental appliance or by increasing the thickness of the upper lip proper by means of a graft.

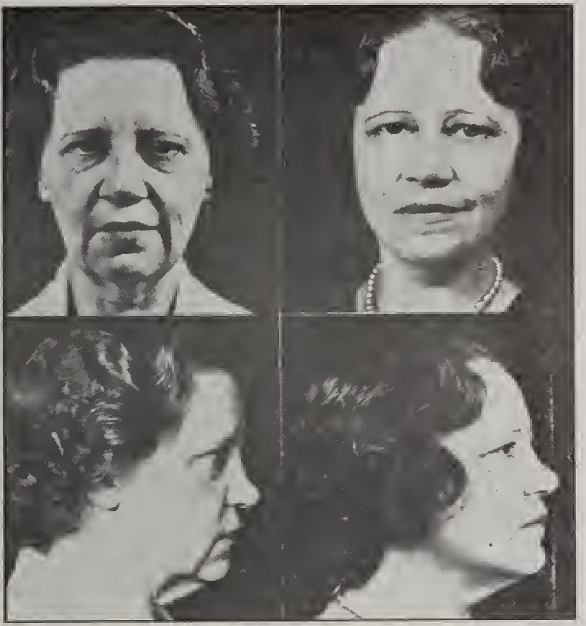

Fig. III

The nose presents various problems and frequently requires surgery due to the vulnerable position it occupies on the face. With the nose as with the ear, we may have partial or complete loss, depression or distortion of the nasal bridge, or hypertrophy of one or all of its parts. Complete losses are best required by the use of a forehead flap. Partial losses, especially those of the tip, are best corrected by the use of a tubed pedicle flap from behind the ear, from the neck, or from the arm (Fig. IV). The depressed nose, due to loss of the supporting structures—but without loss of lining—is generally repaired by utilizing rib cartilage (Fig. V). As to other substances employed in the repair of saddle nose, may I

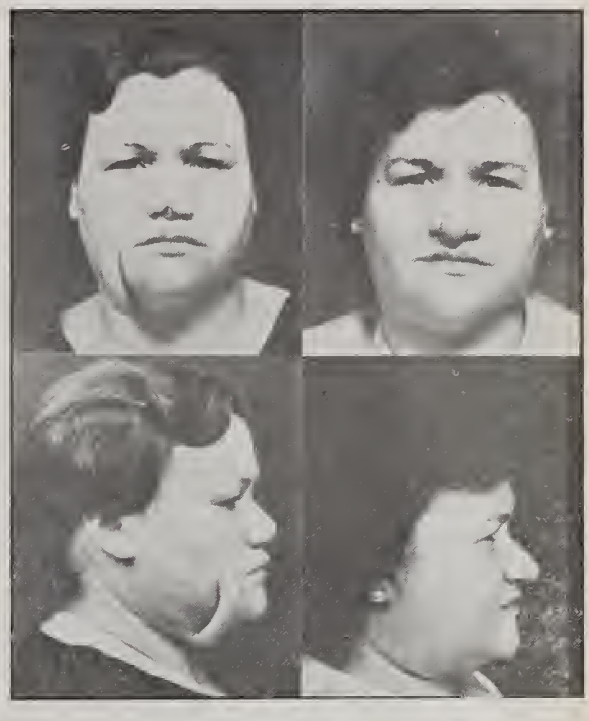

Fig. IV

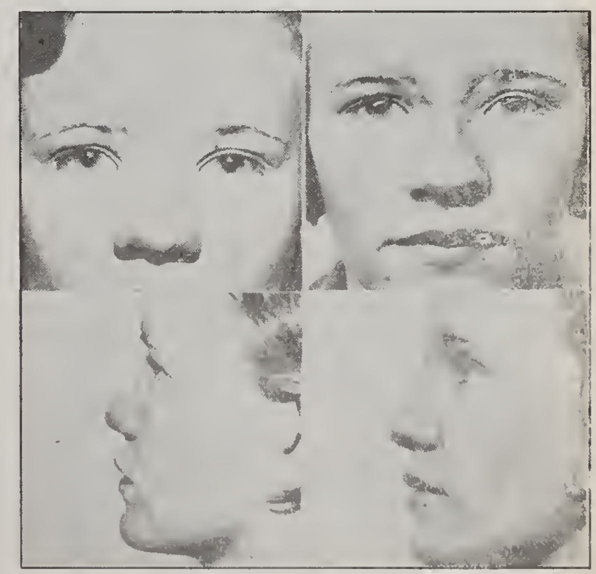

Fig. V

quote from a previous article.[3] "The following substances are used to build up the nose: cartilage, bone ivory, celluloid and paraffin. Of these the rib cartilage is the best because it is easily obtainable, easily shaped, and remains 'as is' in its host. **Always remove all perichondrium.** Bone transplants are most valuable when the loss confines itself to the bony bridge. Ivory has merit only as a temporary framework in infected cases or where the patient does not wish to submit to an autoplastic graft. I feel justified in making this dogmatic statement because I have seen a number of instances in which nature has treated it as a foreign body and cast it off, leaving more severe destruction of the nose than was present before its insertion. Celluloid has been used but discarded for the same reasons as ivory, but with the added hazard that the tissues are even less tolerant to celluloid than to ivory. Paraffin is mentioned only to condemn it, since we have all seen the condition known as paraffioma, due to the ravages of injected paraffin with its resulting slough."

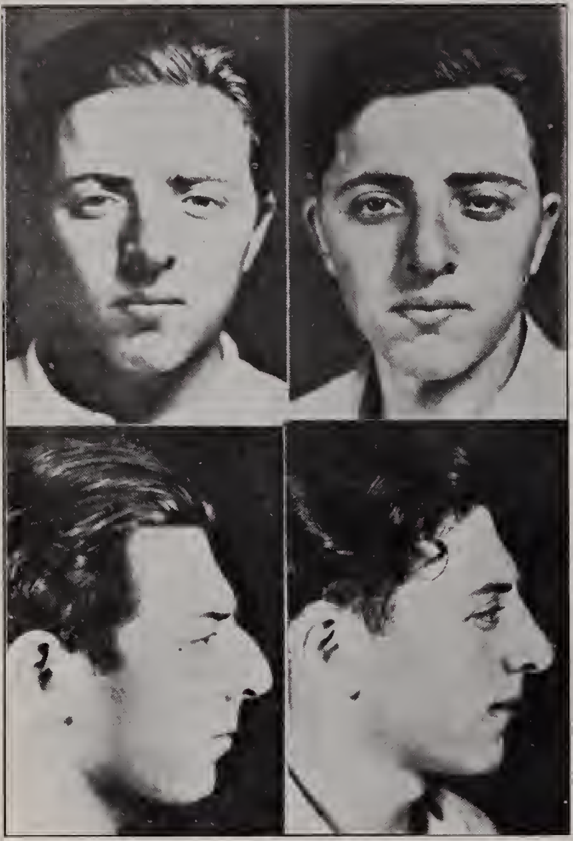

Fig. VI

The nasal lining in cases of severe luetic disfigurement can best be supplied by a tubed pedicle flap from the arm and if necessary this same flap can be utilized to repair any other losses which so often appear concurrently with destruction of the lining. A detailed report of the method may be found in a former article.[4] Specific destruction of the framework of the nose without loss of the soft tissues is handled in the same manner as severe saddle deformities.

In dealing with the over-sized nose our problem is a simpler one because it is easier to remove than to replace .Fig. VI). Nasal enlargements group themselves into bone, cartilaginous, or tip hypertrophies. These may occur singly or in combination. In dealing with bony humps of any size, it is generally best to narrow the nasal process, otherwise the nose is apt to be too broad from the front view, a condition which offsets the improvement gained in the profile. In the removal of excess cartilage, it is best to over-correct slightly for cartilage has a tendency to spring back, and in reducing the hypertrophied tip, it is best to excise sufficient soft tissue and cartilage to allow the elements to assume their new shape without the use of force.

Mammaplasty or breast plastic is one of the newer accepted procedures for the correction of hypertrophied or pendulous breasts. This is often done at the request of the patient's general physican who feels that such a deformity is a menace to the patient's physical and mental well-being. There are now well established methods which assure satisfactory results (Fig. VII).

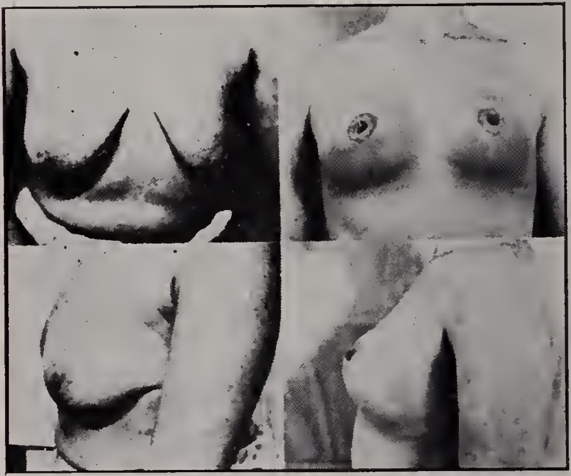

Fig. VII

To sum up, may we cite the following advances in this field during the last decade in order that we may project our vision into the future:

First, today the majority of the best hospitals in New York and other large cities have well established plastic departments and clinics so that the facilities for correcting physical and mental handicaps are as available to those who cannot afford to pay as are other branches of medicine and surgery.

Second, several of the large medical schools now have chairs for research in plastic surgery.

Third, technique especially fitted to this type of work has been developed and standardized, for reparative operations are detailed and demand a most exact and comprehensive plan, many cases requiring a period of months for completion.

Fourth, its results aided by the improved antiseptics and anesthetics now available, are as accurate and certain as in any other field.

And finally, reconstructive or plastic surgery has not only proved itself worthy of a definite place in today's surgical program, but also forecasts almost unlimited possibilities for the future.

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The Present Status of Transurethral Electroresection of the Prostate Gland

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—and—
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Hypertrophy of the prostate gland is the most common cause of urinary difficulty after the fourth decade of life. Its management, therefore, involves a tremendously important medical problem.

Elaboration of new transurethral methods of attack upon the obstructing prostate represents probably the greatest advancement made in urological surgery within the past ten years; however, the status of the new developments is hazy in the minds of many physicians. Protagonists of the new method of transurethral electro-coagulation have filled the medical literature of the past five years with a barrage of conflicting data sufficient to bewilder the average reader.

In the hope that we may be able to assist the general practitioner in evaluating prostatic resection, we here present a brief discussion of our impressions of the advantages and the limitations of this procedure. The views that we shall express are based upon a careful study of the progress of transurethral surgery, and have been checked by our clinical experience which commenced with the first transurethral prostatic resection performed in the city of New Orleans and has extended over a series of hundreds of cases in the intervening years. We have used the new instruments on our service at the Charity Hospital in New Orleans, embracing one of the largest urological departments in the South, and in our private practice from the days of its early development through the years of its stormy rise to prominence.

In our experience it appears certain that transurethral electro-coagulation of the prostate gland deserves a definite place in urology; however, we cannot as yet accept it as having completely replaced prostatectomy.

Mortality from transurethral electrosection

Operative risks in prostatic resections depend largely upon the selection of cases, but even to a larger extent upon the skill of the operator. There is no operative procedure in the whole realm of surgery which requires more painstaking, detailed, and prolonged study than does expert manipulation of the electric resectoscope. The best results can be obtained only after years of observation of the male bladder and urethra with a superimposed familiarity with the employment of the transurethral instrument.[1]

In his first hundred cases of prostatic resection, Alcock[2] had a mortality of 15 per cent. Out of his series of more than 1400 cases, the death rate fell in the last 275 to less than one per cent. His figures, though better than those of most competent urologists, show the general trend of improvement which comes only after considerable experience. Lowsley,[3] whose New York urological clinic is one of the largest in the world, reported in his series of 99 cases a 10.11 per cent mortality. Kretschmer,[4] reports a death rate of 3.08 per cent; Herman and Greene[5] experienced approximately 2 per cent; and Thompson and Braasch,[6] from a study of 721 cases at the Mayo Clinic, proved that a mortality of less than one per cent can be obtained.

From the foregoing figures it appears that the early transurethral resection experience of the most prominent urologists has not been happy; but that after much diligent training the expert electro-coagulationist can promise a mortality of less than 5 per cent.

We have had occasion to check the results obtained in the early experience of a number of Southern genito-urinary specialists. From this data it may be concluded that the average urologist will be faced with a morality rate of about 20 per cent at the end of his first few months of experience. As hundreds of cases accumulate the operator's mortality should be markedly diminished.

Suprapubic prostatectomy, in competent hands, carries a mortality of 5 to 10 per cent. Alcock,[7] reported in 400 cases a death rate of 24.2 per cent. In our experience[8] the latter figure is high, but even if the lower estimates of fatality from the older operation are accepted there is a definite advantage in favor of resection. This statement holds true however only when the resection is done by an experienced competent man. Of the two procedures, one may learn to perform prostatic enucleation competently much more quickly than transurethral electroresection. After all, in determining which method is the better the individual equation must not be overlooked.

Advantages of transurethral resection

Inasmuch as the transurethral approach requires no incision through the abdominal wall or perineum, the shock is much less. Likewise, the period of preoperative preparation and postoperative hospitalization with its resultant expense is shorter in resected cases. Many advocates[9 10] of the new method claim that it may be applied in the presence of marked constitutional debility contra-indicating incision through the bladder. The method is also generally considered applicable in treatment of incurable carcinoma of the prostate gland, in which the urinary outlet is obstructed. These cases heal almost as well as do the resected benign hyperplasias of the prostate, often affording marked relief of symptoms for a considerable period of time. The argument that patients will submit themselves to resection which they may be convinced to fear less than cystotomy is valid, but the conscientious urologist should beware of the pitfalls of unscrupulous prophylactic prostatic resection.

Dangers of resection of the prostate

To the overenthused beginning resectionist who speaks in glowing terms of unbelievable results, we should point out the graveyard of prostatic disaster with its toll of hemorrhage, immediate and delayed; bladder phlegmon; rupture of the bladder wall with peritonitis; perivesical abscess; pyelonephritis; uremia; septicemia; and the other causes of the burial of his mistakes. Likewise, he should not be permitted to forget the picture of the postoperative urinary incontinent, a living testimonial of his misplaced enthusiasm.

Indications

To advise intelligently his patient what type of prostatic operation is indicated, the general pracitioner must rely to a large extent upon the assistance of a trained cystoscopist. This, however, should not cause the physician to minimize his part of the examination.

Patients above forty years of age who present themselves with urinary difficulty should be considered to have prostatic hypertrophy until proved otherwise. A history of nocturia, diminution in force and size of the urinary stream, inability to start and stop micturition, frequency of urination (frequently unassociated with burning), and often dribbling should support the suspicion of hypertrophy of the prostate. Rectal examination digitally may or may not disclose enlarge ment of the gland. The size, shape, consistency, and degree of tenderness of the organ will provide evidence in differentiating acute and chronic prostatitis, periprostatitis, malignancy and benign hyperplasia. There often is a combination of hypertrophy and chronic prostatitis, in which event the urinary difficulty may respond to massages, irrigations, and other non-operative measure. Conscientious practitioners will not defer cystoscopy in doubtful cases. Absence of any enlargement as determined rectally does not mean that there is no obstruction to the urinary stream by the prostate. The presence of median bar formations, vesical neck contractures, and small lateral lobe enlargments can be ascertained only by means of the cystoscope. If all other causes of urinary difficulty are eliminated, one of the above may be assumed to exist. By passing a 24 French catheter, urethral stricture may be ruled out and at the same time he urinary bladder residual tested. By the time the prostate gland has become sufficiently large to cause urinary difficulty, there usually will have been produced a distortion of the bladder preventing complete evacuation of its content with a resultant stasis of at least fifty cubic centimeters of urine.

After the general practitioner has exhausted his means of diagnosis he will probably desire to reserve opinion at to what further procedure should be employed until the urologist has reported the results of cystoscopic examination. The extent and type of intravesical and intraurethral enlargements of the prostate should have an important bearing upon the selection of the operation to remove the obstructing tissue.

Nearly all competent urologists are now of the opinion that median bars, small median and lateral lobe hypertrophies, and vesical neck contractures should be removed transurethrally if the services of an expert resectionist are available. The huge glands, as a general rule, can be safely resected and that which requires more extensive operation should vary with the capability and individuality of the urological surgeon who is to have the case in charge. As Hugh Cabot[11] states: "The real nub of the question turns upon the decision as to who is to treat by operation these people with obstructing prostates. If they are to be treated in the future as in the past, largely by the general and perhaps occasional surgeon, then the indications are for an operative method as nearly fool proof as may be. But this does not seem a high ideal for surgical practice. If it is the standard that we are to accept, then we must take it with a mortality, which in this country at least has rarely been below 15 per cent or even 20 per cent. That an elderly man is likely to shy at such a risk will be evident. If these men are to be treated by experts, then transurethral resection can already claim over 500 such cases carefully observed in which the mortality rate has been below 2 per cent and the hospital confinement has been less than a week, with functional results the equal if not superior to those obtained by the older methods."

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Hyperemesis Gravidarum

Report of a Small Series of Cases Treated with Eschatin (Suprarenal Cortex Hormone).

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In presenting this paper on the treatment of hyperemesis gravidarum, it is my hope that this form of therapy will prove as successful in your hands as it apparently has proven in this small series of cases treated at the Vicksburg Sanitarium. I am not trying to recommend the use of this treatment to the exclusion of other well-recognized and well-planned forms of treatment, but rather hope it will prove to be a valuable addition to our available therapeutic measures. The etiology of hyperemesis gravidarum is apparently still more or less obscure, although much work has been done in studying the blood, urine, and other lines of study on these patients. Thus far the chief findings of interest are a high ammonia coefficient in the urine with decreased urinary output, high specific gravity, acetone bodies in the urine, and presence of bilirubinuria in cases that have progressed to a very toxic state. In the blood there is usually an increase in the non-protein nitrogen, uric acid and urea nitrogen, due, apparently, to a concentration of the serum protein as a result of the loss of body fluid. The acid base equilibrium is not usually affected, except in extremes. No form of liver function test has given a satisfactory index to the amount of liver damage. There is a decrease in the chloride content of the blood, also probably due to the loss of body fluids.

Nausea and vomiting of pregnancy occurs in approximately 50 per cent of all pregnant cases in greater or lesser degree, according to Dr. DeLee's estimate. Cases of severe vomiting can generally be divided roughly into three stages, of which there is no definite line of demarcation. The first stage consists chiefly in

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*Read before the Northeast Mississippi Thirteen County Medical Society, Amory, Miss., Sept. 15, 1936.

persistent vomiting, some anorexia, insomnia, excessive thirst, scant high-colored urine with appearance of acetone bodies in the urine, and occasional blood and casts. This may progress to the second stage, which is really an exaggeration of the symptoms in the first state and, in addition, the patient begins to show more definite signs of anhydremia and toxemia, with pale dry skin, rapid weight loss, intolerable thirst, rapid weak pulse, scaphoid abdomen, with dry, crusted, and sometimes eroded, areas on the lips and around the mouth, and with a fetid or acetone breath. The final stage consists chiefly of mental aberration, delirium, headache, somnolence, stupor and, invariably, coma. Vomiting usually ceases at this stage, but general prostration rapidly augments, icterus and cyanosis appear, and the patient may expire at any time. Herein lies a warning, that is, never to let a patient progress to the third stage, for even a therapeutic abortion will do no good at this point. In the treatment of this condition, it is now generally accepted that four primary factors must be always taken into consideration in any form of therapy, namely: 1. The mental makeup of the patient, especially regarding tendencies to hysteria or neuroses. 2. The amount of dehydration that has taken place in the patient when treatment is begun. 3. The progress that the toxemia has made in this particular patient. 4. Careful study for possible foci of infection or other factors that may cause vomiting, such as appendicitis, nephrolithiasis, etc.

At the Vicksburg Sanitarium in the past year and a half, we have treated six cases of hyperemesis gravidarum with eschatin. All of these cases recovered from their vomiting and four have already delivered normal healthy babies and two are undelivered.

CASE I

Mrs. B. J. P., 20, primipara, was admitted to the hospital April 25, 1935, with a history of vomiting for the past five weeks, which at first was in the early morning only, with continuous nausea throughout the day, but for the past eight to ten days the vomiting had been persistent and she has been able to retain hardly any nourishment. The last menstrual period was in February, 1935. She was under the care of a local physician, but failed to respond to the usual treatment of sedatives, diet measures, rest in bed, and even had been in another hospital for several days and given intravenous glucose and rectal sedation without improvement. She was transferred here at her own request for further treatment. Having just read an article in the April issue of the American Journal of Obstetrics and Gynecology, by Drs. Freeman and Melick, on the use of suprarenal cortex therapy in a case of pernicious vomiting, I decided to try this form of therapy on this patient. Examination on admission showed a well-developed female, acutely ill, showing evidence of dehydration and loss of weight, with dry, coated tongue and dry, cracked lips. Temperature was 98.6, pulse 86, respiration 18, blood pressure 100/60. Pelvic examination confirmed the diagnosis of twelve to fourteen weeks pregnancy. General examination otherwise not remarkable. Laboratory reports as follows: Catheter specimen of urine showed specific gravity 1.035, with slightest possible trace of acetone and rare fresh blood cells in the microscopic. Serology was negative. Leukecyte count not remarkable. Red blood cells 4,030,000, hemoglobin 82 per cent. Patient immediately put to bed and given retention enemas every eight hours containing sixty grains of bromide in eight ounces of saline and glucose. She was put on a special diet which consisted chiefly of liquids (carbohydrates) every hour as desired. She was considerably nauseated all day and refused practically all of her nourishment, vomiting what little she attempted to take. She was rather restless that night and still did not retain any nourishment. The next morning she was given 5 c.c. of eschatin in the muscle of the buttocks and this was repeated again that evening. The patient showed slight improvement and retained some of her nourishment that same evening. The next day the eschatin was again repeated in the a. m. and p. m. Patient was very much improved and retained all food eaten that day and stated that for the first time in five weeks she really felt hungry. The bromide was cut by rectum and she was given 20 grains every six hours by mouth. Next day patient was allowed up in a wheel chair and out on the porch, eating well and had a very good appetite. She was discharged on the first of May very much improved. She had no further trouble from vomiting. She delivered a normal female infant some months later without discomfort.

CASE II

Mrs. J. W. P., 37, primipara, admitted to the hospital on the 19th of May, 1935, with a history of vomiting in the morning and considerable nausea during the day for the past two months, with continuous vomiting of all foods taken for the past three to four days. Last menstrual period was in January, 1935. Patient had been seen in the clinic in March and treated for the nausea and vomiting prior to her admission to the hospital, but had failed to respond to the usual treatment in the early cases. There was in this case the previous history of hysteria, as she was treated here in 1933 with that diagnosis. Examination on admission showed a well-developed patient with evidence of dehydration and slight loss of weight. The lips were dry and coated. Blood pressure 110/70, temperature 98.8, pulse

90, respiration 18. Patient nervous and restless during the examination. Pelvic examination confirmed the diagnosis of 14 to 16 weeks pregnancy. General examination otherwise not remarkable. Laboratory findings as follows: White blood count, 10,500, with 73 per cent polys. Red blood count 4,450,000; hemoglobin 82 per cent. Urine: Specific gravity 1.025; otherwise not remarkable. Patient immediately put to bed and given retention enema of 60 grains bromide, 20 grains chloral in 8 oz. of saline and glucose every six hours. Special diet, similar to the previous case, was ordered. At the time of admission, patient was told of the new treatment and was assured that it would greatly help her. (The suggestion factor may have played an important part in this case). She was given 5 c.c. of eschatin in the muscle of the buttocks that afternoon and again that night. The nervousness of the patient and anxiety had improved considerably the next morning and she was able to retain most of her nourishment. The eschatin was again given at 8-hour intervals the next day, two doses being given. The bromide and chloral was cut by rectum and she was put on 20 grains by mouth every six hours. She was discharged on the 21st of May, feeling fine and much pleased over the result. She delivered prematurely on October 2, 1935. Baby is living and well.

CASE III

Mrs. D. H. S., 30, para III, was admitted to the hospital on the 8th of September, 1935 with a history of nausea and vomiting for three weeks and has been unable to retain any nourishment for the past week. The last menstrual period was in August, 1935. She had a previous history of toxemia with all of the previous pregnancies in the form of nausea and vomiting during the first three months, but never as severe as at the present time. Examination on admission showed a well developed patient with marked evidence of undernourishment and dehydration, with dry, coated lips and tongue and an acutely ill appearance. Temperature 98, pulse 120, respiration 18, blood pressure 120/80. Pelvic examination confirmed diagnosis of early pregnancy, probably six to eight weeks. General examination otherwise not remarkable. Laboratory findings: Urine, specific gravity 1.026; slight trace of acetone; otherwise not remarkable. Serology was negative. White blood count not remarkable. Red blood count and hemoglobin normal. Patient immediately hospitalized and was given two grains of luminal every four hours for nausea and special diet. She was given 1000 c.c. of 5 per cent glucose with normal saline, and 1 c.c. of U-20 insulin that afternoon, intravenously. She continued to vomit and was very restless and uncomfortable. She had a very poor night. The next morning the glucose and insulin was again repeated and the patient was still unable to retain any nourishment. Her temperature varied from 98.6 to 99.4, pulse range from 80 to 90. She was given 5 c.c. of eschatin that evening. The next morning she was again given 5 c.c. of eschatin intravenously and glucose and insulin to balance. Her condition had not improved a great deal at this point, although the urinary output was better. She was again given 5 c.c. of eschatin that evening and had a very much more comfortable night. Glucose and insulin was repeated again the next morning and for the first time patient was able to retain some of her nourishment, but still vomiting several times during the day. Urinary output was greatly improved. The next day patient was able to retain most of her nourishment. Blood chemistry taken on this date showed urea nitrogen 18.6 mg., chlorides 380 mg., sugar 87 mg. per 100 c.c. Improvement from this point on was continuous and patient was discharged on the 18th of September in good condition and had no further trouble from her vomiting of pregnancy and was delivered of a normal infant at a later date.

CASE IV

Mrs. S. T., age 27, para II, admitted to hospital November 1st, 1935, with a history of nausea for three weeks, vomiting in the morning for two weeks and almost continuous vomiting for the past week and able to retain hardly any nourishment. She had been treated by her local physician with sedatives and injections of corpus luteum extract daily, diet measures, etc., but did not respond to the treatment. There was a history of nausea and vomiting in two previous pregnancies, but never as severe as in the present one. Examination on admission showed a fairly well developed patient who is undernourished, emaciated, and rather acutely ill. Temperature 99, pulse about 86, respiration 18, blood pressure 105 80. Pelvic examination confirmed the diagnosis of early pregnancy, approximately 10 to 12 weeks. General examination otherwise was not remarkable. Laboratory on admission: Urine, specific gravity, 1.0223; acetone, large trace; otherwise not remarkable. Blood: Hemoglobin, 92 per cent; red blood count, 4,140,000; differential count not remarkable. Serology negative. Patient immediately hospitalized and put on regular treatment of retention enemas of bromide, grains 60, per rectum, in saline and glucose every eight hours, and special diet. In order to estimate further the value of eschatin, I let this case go for several days on this treatment, with the addition of 200 c.c. of 20 per cent glucose given in the vein the morning of the second day. The patient showed no signs of improvement and retained very little nourishment, being continuously nauseated and vomiting practically everything she took. At 6 p. m. on the afternoon of the 2nd day, she was given 5 c.c. of eschatin in the muscle. The next morning patient had eaten a soft egg and toast and was sitting up in bed when I walked into the room, feeling fine and asking for more food. This was, unquestionably, the most remarkable change we had seen in such a short time following the treatment. I did not give her a further injection of eschatin in order to see if she would continue to improve without further injections of eschatin. She felt about the same for several days, but the nausea did return on the fifth of November, although urinary output and general condition were improved. I then gave her another injection of eschatin on the sixth of November and improvement immediately followed as before. The bromide by rectum was cut and she was given 20 grains by mouth every four hours. It was not necessary to give her any more injections of eschatin. She was discharged from the hospital on the 8th greatly improved. Her local physician informed me that although the nausea recurred to some extent during the next few weeks, she was never vomiting as before and felt considerably better following the treatment. She was delivered of a normal baby in June of this year.

Mrs. L. C. L., 25, Gravide II, was first seen in the clinic on the 8th of April, 1936, with a history of persistent nausea and almost continuous vomiting in the past 3 to 4 days. Last menstrual period was February 17, 1936. She gave a history of one previous pregnancy which she lost at about 4 to 5 weeks, following two weeks of almost persistent nausea and vomiting, with no complications following. Examination showed a well-developed and fairly-well-nourished patient, very nervous, and appeared fairly acutely ill. Pelvic examination showed thefundus slightly enlarged and a soft, boggy uterus, which was slightly enlarged. Cervix was cyanotic, in keeping with early pregnancy. Examination otherwise was not remarkable. Laboratory: Catheter specimen, specific gravity, 1.027; acetone, slightest possible trace. Blood: Hemoglobin 87 per cent; red blood count 3,830,000; leukocyte count not remarkable. Serology negative. Cervical smear not remarkable. She was given 5 c.c. of eschatin in the muscle that day and was also given 20 c.c. of 20 per cent glucose in the vein and put on bromide by mouth 15 grains every four hours. She was again given another dose of eschatin the next day at which time she was feeling better, but not completely relieved, and was also given another dose of the glucose. The following morning the patient came in and I was surprised at the breakfast that she told me she had eaten that morning, as it was practically as much, if not more, than the average individual would take for breakfast. She was again given one injection of eschatin and glucose in the vein and advised to continue on the bromide and continue on frequent small feedings with rest in bed. Her marked improvement did not continue, however, and she again became nauseated about a week later, but vomiting but very little, and did not feel nearly as bad. She was given 20 c.c. of 20 per cent glucose and advised to continue on her same treatment otherwise. This was repeated again every other day for a week, at which time she was somewhat improved and only complained of nausea at times. She was given one more injection of eschatin on the 16th day of April. Because of a sudden increase in the vomiting on April 21st, she was admitted to the hospital and given 500 c.c. of 10 per cent glucose intravenously and bromide, grains 20, every four hours by mouth, with rapid improvement and cessation of the vomiting. The glucose was again repeated on the next day and she was discharged on the 23rd feeling much better. Since that time, she has occasionally vomited, but has not been nauseated, except rarely. Condition at present is quite satisfactory and she is being observed in the prenatal clinic prior to her expected delivery some time in the latter part of November, or early December.

CASE VI

Mrs. J. M., 31, Para I, was first seen in the clinic on August fiifth, 1936. Last menstrual period was June seventh, 1936. She had had persistent nausea and vomiting for the past four to five weeks, but was able to retain some nourishment. She was, however, becoming nervous and weak and losing some weight. She had a history of one previous pregnancy about four years ago, with which she had also had some nausea and vomiting during the first four months, but not as severe as the present. Examination showed a well-developed fairly well nourished patient who showed evidence of some weight loss, and dehydration, with dry lips and dry, coated tongue. Pelvic examination confirmed diagnosis of early pregnancy of eight to ten weeks' duration. Examination otherwise not remarkable. Laboratory findings: Urine, not remarkable. Blood: Hemoglobin, 82 per cent; red blood count, 4,150,000; leukocyte count not remarkable. Cervical smear not remarkable. Serology negative. She was given 2 c.c. of eschatin in the muscle and 20 c.c. of 20 per cent glucose in the vein and was put on bromide, grains 15, every four hours, with frequent small feedings and rest in bed. She was again seen the next day, feeling somewhat better and was again given eschatin in the muscle and glucose in the vein and this was repeated on the next day, with considerable improvement and patient has not been seen in the clinic since and felt so much improved that she is spending a few weeks with her parents in another town.

COMMENTS

In conclusion, the results of treatment in these six cases strongly indicate that eschatin is a valuable adjunct in the treatment of hyperemesis gravidarum. I do not want to give you the impression, as I stated before, that it is a panacea for all cases; but it does seem to have demonstrated thus far, in our experience, that it is worthwhile. We have observed no reactions from the injections and have not observed any ill effects. The dosage that we gave was 5 c.c. intramuscular. Smaller doses may be just as effective. A smaller dose was used in the last case and seemed to be equally effective.

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Yellow Fever In Mississippi 1878-1905

HARRIS ALLEN GANT, M.D.
Columbia, Tenn.

1898
ORRWOOD—continued

CHAPTER V

In the history of yellow fever, there has probably never been an epidemic so unique, so favorably located, and so fully and carefully studied, or by so painstaking, able, and conscientious authority, as H. R. Carter, as was that at Orrwood. The following points of interest may be called to mind.

Location interior, was far from any seaport, nine to twelve miles from a railroad, too distant for atmospheric infection. The road through the community, an ordinary country road, over which there was not much travel.

Homes, usually more than a mile apart, many of them several miles distant from each other, in a hilly, healthy section of north Mississippi, where yellow fever had never been known, either as an epidemic or endemic. The fever was of the same mild type, as that at Ocean Springs in 1897. The mortality was very low, which seems to controvert the idea that the disease is always more fatal, when introduced into virgin territory, remote from its usual habitat.

The citizens, all non immune, practically all white, no foreign element and only a few negroes. It was an ideal, rural neighborhood, of honest truthful, industrious farmers, who cooperated with willingness and intelligence and without manifesting great fear, with the health authorities, trying to control the disease, concealing nothing. It was remarkable, with what fortitude they accepted the situation, when fever was declared, and how earnestly they went to work, assisting in nursing, in locating cases or reporting suspicious cases. Everything worked smoothly. There was no opposition, and no refugeeing. No rushing for health certificates. They were content to stay at home, and did not resist being quarantined in their homes, usually obeying instructions implicitly. When sickness occurred in their homes, they willingly promised to keep, and as accurately as possible, under the trying circumstances, kept records for the doctors, of first and secondary cases, time of attacks, exposure, etc. All of which added greatly to the value of the house records, furnished the doctors. We were greatly assisted by a man, who deserves more than casual mention, in this report, namely Dr. W. M. Mathis, the local physician, who although like W. T. Matthews, a non-immune, gravely stood to his post and gave most valuable aid, finally having the fever, rapidly recovering, and working to the end of the epidemic. He had been earlier in life, so unfortunate as to have lost an arm, but that did not prevent him from doing a large practice and holding the respect, love, and confidence of the community. Both he, and W. T. Matthews deserve great credit, the former, for staying with his people, and the latter, for volunteering to go out to Orrwood, on the 30th of August, after the sickness there had been found to be yellow fever. Dr. von Ezdorf, U. S. P. H. should be mentioned also in this connection, for he, a non-immune, came to Taylor, subsequently to Orrwood, and came down with the fever, September 27th. He occupied a tent at J. W. Gray's. He was a young man of marked ability, active and earnest, lending himself, without stint to the work, and proving to be most valuable, in his services after being immunized. Later in life he became a notable writer on sanitary science.

It is not my desire to draw invidious comparisons, but these men deserve as much praise as the men who in 1900, working with the Army Commission in Havana, submitted themselves to the bite of infected mosquitoes. The men in Havana took no more risk of having yellow fever from the bites of the mosquito, as far as they knew, than the non immune who exposed themselves at Orwood and Taylor. They knew, if they contracted the fever, they would have hospital facilities, trained nurses, and treatment by most eminent men, experts such as Reed, Gorgas, Finley, and others. While the men at Orrwood had no such facilities, were remote from hospitals, having to depend upon untained nurses, and generally inexperienced doctors. All praise to the men of the Army Commission in Havana, who submitted themselves willingly to the bite of the mosquito. They were heroes, and deserve the grateful appreciation and praise that has been so universally accorded them. But let not Matthews, Mathis, and von Ezdorf, heroes of the epidemic of 1898, be forgotten.

The Gray house, felicitiously called the "Gray Mansion" by Dr. Carter, was the starting point of the fever in this community, and most be distinguished from J. W. Gray's and Dr. A. S. Gray's who had a home in Orrwood, although he had been living for sometime in Taylor, where he died. It was situated on a hill overlooking a large front lawn, a garden, fields, and woods nearby. It was the ancestral home of a large family. The Grays and Orrs (related to the Grays) were the outstanding people in that community, hospitable, intelligent, educated, and influential. Four cases of sickness were found in this house on the 29th of August, and on the next day declared to be yellow fever. The diagnosis was accepted without any wrangling or questioning as was also the tracing of the fever to Taylor. The house was badly infected and from it the fever was carried to many other homes. Of some forty-six cases that developed in the community forty-five were traced to the Gray home. This house, No. 1 in Carter's list of twenty "house records" was of great interest to him. At that time he believed thoroughly in the "infection of environment by the patient" or "house infection," and this house and its environment were carefully studied. His observations in this and other homes are recorded in "A note on the interval between infecting and secondary cases of yellow fever from the records of the yellow fever at Orrwood and Taylor, Mississippi in 1898," referred to in preceding chapter.

It is not my purpose, to add anything to the discussion of these "house records," because at this late date, it is impossible to remember all the details, and if remembered, they would probably add nothing to the interest or value of Dr. Carter's notes. It is pertinent to state, however, that the conclusions arrived at, by Dr. Carter, establishing the time of house infection two to three weeks, coincides with "The extrinsic incubation period of yellow fever" when applied to the transmission of the fever by the mosquito, which has been proven also to be from twelve to twenty days.

This definition, "extrinsic incubation period of yellow fever" is complex, somewhat involved, and rather confusing. The incubation period in man is from three to five days, (not from one to seven days as mentioned by Reed in his report). In estimating the time of this "extrinsic incubation period," the time of incubation in the primary case is not considered, for the time begins with the coming down or sickening of the individual, extending to the time when the secondary case or cases become sick, and this time, includes the incubation period of the secondary cases, the entire time being from twelve to twenty days, or practically, if not exactly that number of days. Dr. Carter says in his notes, "The time from the infection to a secondary case obviously consists of three periods:

(1) The time from the development of the infecting case to the time the environment is capable of developing infection in other men, plus

(2) Time the individual in question is exposed to the environment before he contracts the disease, plus

(3) Time from the date of contracting the disease to its development in him.."

We understand then, if a man having contracted the fever, comes home where there has been no possible chance of the house being infected, some change in the atmosphere of that house, possibly fomites brought in with his clothing, or some materies morbi is developed by him in the house, which causes other members of the household, who are constantly there, to become sick, within two or three weeks. Now this is, "extrinsic incubation," incubation external, to the sick man, but a certain incubation takes place, internal, intrinsic in the secondary cases within the ordinary incubation period in man, and this period must be considered, since the time is from the sickness of the primary to the sickness of the secondary case.

Now according to the mosquito theory, if there happened to be a female stegomyia fasciata in that house, and she fed upon the sick man within the first three days of his illness, she became infected but not yet infective, for, although she might bite other members of the family, they would not have yellow fever until the expiration of the incubation period in her, twelve to twenty days, intrinsic in the mosquito but extrinsic to the men. After that time elapsed, her bite would be infective, and productive of yellow fever, within from three to five days in other members of the family, secondary cases. Dr. Carter had been working for more than ten years to establish definitely the fact that a house would become infected and that other people staying in the house would have yellow fever at definite time after exposure to first case. He was convinced of this truth just as fully as Finlay was convinced that the mosquito conveyed yellow fever, but had never been able to get satisfactory data by which to prove it. He realized the importance of establishing this period because he knew that it would have great effect in regulating quarantine and the control of epidemics. Other investigators had observed that it required from ten days to three weeks for other cases to be developed from the first case sick in a house. It was generally believed that there would be no more yellow fever in a house unless it developed within ten days and quarantine regulations were generally based on that idea.

In my report to the Mississippi State Board of Health, dated November 30th, 1898, in the preceding chapter, the statement is made: "The average period of incubation was four and one half days, the average time for a house to become infected and for people to begin sickening in the house after the introducing of the first case, was about twenty-one days." It is gratifying to read, in Dr. Carter's great work, very recently publishd, "Yellow Fever, An Epidemiological and Historical Study of Its Place of Origin," that, "The period of incubation for yellow fever, in man, that is, the time from the date of infection to the beginning of the attack, is in nature roughly from three to six days," an average of four and a half days, coinciding with our finding of 1898. The average period of house infection at Orrwood is given as, "about twenty-one days," which agrees fairly well with Carter's findings. But my findings were based more on conjectures following discussion of the matter with Carter, than upon actual knowledge. Carter had been a keen, well-trained analytical mind, was logical in his deductions, accurate in his observations, and untiring in his efforts to establish a principle. He had the idea, and would not be satisfied, until he had proved it to be true or false. This epidemic gave him the opportunity he had been looking forward to and the "Gray Mansion" at Orrwood was the first step in the establishing of the house infection theory, thereby furnishing the key to the "mosquito theory of transmission of yellow fever." In a most careful and scientifiic method of observation of cases, times of development after exposure of other cases in the house, he finally satisfied himself and announced his findings to the medical profession nearly two years before the mosquito theory was established in Havana and published his discovery in the New Orleans Medical and Surgical Journal, May, 1900, at least four months before the announcement of the establishment of that theory.

The Army Commission, headed by Major Reed, was pointed in 1899 and went to work in Havana, early in 1900, with instructions, as I have understood, to pay especial attention to the part played by the mosquito, in the transmission of yellow fever. Finlay, of Havana, had announced in 1881 that, in his opinion, yellow fever was conveyed by the mosquito, and he never gave up the idea but continued to experiment with mosquitoes, although not able to establish that fact. He deserves the greatest credit for his persevering, painstaking work, which he carried on, regardless of laughter, criticism and taunts of men, who would not believe him. Gorgas during the first year of his work, attempting to rid the city of yellow fever, would not accept the mosquito theory. Finlay, however, was a great and truly scientific physician and was correct in his idea, as was finally proved by the Army Commission. He had an essential idea, founded upon careful observation but could not prove it. Carter had an essential idea founded upon years of careful observation, investigation and study and was fortunate enough to be able to prove his idea, and in this way furnished the necessary knowledge to the establishment of the mosquito transmission theory. He furnished the key by which Finlay's idea was established. Now, which is the greatest scientist of the three, Finlay who gave the idea, Carter who gave the key, or Reed, who simply inserted the key into the mystery box of yellow fever? Finlay's idea could not have been established without the key, and Reed would not have had the key, had it not been for Carter's discovery of "the extrinsic incubation period of yellow fever." The truth established by Carter would have remained true, as it is, had the experiment by Reed and the Army Commission failed. The man who has a fixed idea, and proves it to be true, is greater than the one who simply accepts ideas suggested by another, and by experimentation proves or disproves the same. A most interesting paper, by Marie Doughty Gorgas and Brutom J. Hendrick, "Yellow Fever Meets Its Master," World's Work, April, 1924, says, "But the way proved almost as difficult for Reed as for Finlay. It was not until August, 1900, that Reed turned to the Finlay theory of mosquito infection. Dr. Finlay himself furnished the mosquitoes or rather the eggs, a plentiful supply of which he always kept on hand. But the early Reed experiments proved as unsatisfactory as Finlay's. The Finlay mosquitoes were fed on patients, ill with yellow fever, and then these same mosquitoes were allowed to suck blood of men in normal health. Dr. Jesse W. Lazear and Dr. Carroll, both members of the Reed board, subjected themselves to these tests and came through, without the slightest injury. The records now show clearly enough why these first experiments failed. Lazear and Carroll had indeed made precisely the same mistakes as Finlay. A year previously Dr. Henry R. Carter of the P. H. S. had published a paper disclosing his great discovery of a period of extrinsic incubation of yellow fever. Briefly, this meant that a period of from ten days to two weeks intervened between one case of yellow fever and another apparently derived from it. The first experiments had ignored this discovery of "extrinsic incubation." And they ignored likewise another fact of importance which the Reed board subsequently brought to light.

A little discouraged by these results, Carrol and Lazear, in the next month, became somewhat careless with their infected mosquitoes. On September 16th, Gorgas was asked to visit his friend, Dr. Carroll, who was suffering from what seemed a "slight indisposition." Gorgas was shocked at the physician's appearance; he was lying in a state of prostration, his face flushed with a high fever, his eyes blood shot, his restless body tossing on the bed. Dr. Carroll grew steadily worse, and in a few hours was in a condition of delirium. It did not take Gorgas long to diagnose the disease; it was the malady that had long since become such a familiar part of his own life. In his lucid moments Carroll explained that he had subjected his arm to the bite of a mosquito. The hardy experimenter had a severe attack, but, after several days' struggle, he was on the road to a safe recovery.

While Carroll was still lying between life and death, Gorgas received a summons to another member of the Reed Commission. This was Jesse W. Lazear, who, a month previously, had let the mosquito feed upon him with so little results. Gorgas saw at a glance that his friend was now mortally ill with yellow fever. Before he sank into his final delirium, Lazear told Gorgas his story. A few days previously, he had been experimenting with infected mosquitoes at Las Animas Hospital. While he was applying one of the insects to the arm of a soldier, another mosquito, flying about the room, lighted upon Lazear's hand. The physician resisted the impulse to brush it off and permitted it to suck its fill; it was, he added, unquestionably a stegomyia. After telling so much Lazear could talk no more. He became wildly delirious, and soon sank into the throes of one of the most terrible cases of yellow fever that Gorgas had ever seen. In a few days came the black vomit, the usual percursor of death, and on September the 25th, a little more than a week after the mosquito had injected its poisonous dart into Lazear, he passed away.

Naturally, two such events, the narrow escape of Carroll and actual martyrdom of Lazear, produced the most sobering effect. Lazear, young, brilliant, dashing, was one of the best loved men in Havana. Tragic as his fate had been, however, it pointed its inevitable lesson, and inspired a new determination in his fellow scientists. Reed who had been absent in Washington on official duties when Lazear died, now returned to Havana. Up to that time, the mosquito experiment had been more or less casual and haphazard; but these happenings and Reed's return gave them a scientific direction. The story of those next few months has been frequently told. It was at this point that, as I take it, Reed applied the information given out by Carter, and succeeded in proving that the mosquito did convey yellow fever.

Bearing upon this point it is well to know what Major Reed himself had to say, and I am enclosing extracts of the paper published by the Army Yellow Commission in the Proceedings of the Twenty-eighth Annual Meeting of the American Public Health Association, held in Indianapolis in October, 1900, kindly sent me by Dr. Sawyer.

Extract from "The Etiology of Yellow Fever —a Preliminary Note" published in Senate Document No. 822, 61st Congress, 3rd Session, Government Printing Office, 1911.

> Having failed to isolate **B. icteroides** either from the blood during the life or from the blood and organs of cadavers, two courses of procedure in our further investigations appear to be deserving of attention, viz., first, a careful study of the intestinal flora in yellow fever in comparison with the bacteria that we might isolate from the intestinal canal of healthy individuals in this vicinity or of those sick with other diseases; or, secondly, to give our attention to the theory of the propagation of yellow fever by means of the mosquito—a theory first advanced and ingenuously discussed by Carlos J. Finlay, of Havana, in 1881. (Anales de la Real Academia, vol. 18, 1881, pp. 147-169.)
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> We were influenced to take up the second line of investigation by reason of the well known facts connected with the epidemiology of this disease, and, of course,

by the brilliant work of Rose and Italian observers in connection with the theory of the propagation of malaria by the mosquito.

We were also much impressed by the valuable observations made at Orrwood and Taylor, Miss., during the year 1898, by Surgeon Henry R. Carter, United States Marine Hospital Service. A note on the interval between infection and secondary cases of yellow fever, etc. (Reprint from New Orleans Medical Journal, May, 1900). We do not believe that sufficient importance has been accorded these painstaking and valuable data. We observe that the members of the Yellow Fever Commission of the Liverpool School of Tropical Medicine, Drs. Durham and Myers, to whom we had the pleasure of submitting Carter's observations, have been equally impressed by their importance. (British Medical Journal, Sept. 8, 1900, pp. 656-657.)

The circumstances under which Carter worked were favorable for recording with considerable accuracy the interval between the time of arrival of infecting cases in isolated farm houses and the occurrence of secondary cases in these houses. According to Carter, "The period from the first (infecting) case to the first group of cases infected at these is generally from two to three weeks."

The houses having now become infected, susceptible individuals thereafter visiting the houses for a few hours fall sick with the disease in the usual period of incubation—one to seven days.

Other observations made by us since our arrival confirmed Carter's conclusions, thus pointing, as it seemed to us, to the presence of an intermediate host, such as the mosquito, which, having taken the parasite into its stomach soon after the entrance of the patient into the non-infected house, was able after a certain interval to reconvey the infecting agent to other individuals, thereby converting a non-infected house into an "infected" house. This interval would appear to be from 9 to 16 days (allowing for the period of incubation), which agrees fairly closely with the time required for the passage of the malarial parasite from the stomach of the mosquito to its salivary glands

In view of the foregoing observations we concluded to test the theory of Finlay on human beings.

—By Walter Reed, M.D., Surgeon, United States Army; James Carroll, M.D.; A. Agramonte, M.D.; and Jesse W. Lazear, Md., Acting Assistant Surgeon, United States Army.

Reprinted from the Proceedings of the Twenty-eighth Annual Meeting of the American Public Health Association, Indianapolis, Ind., October 22, 23, 24, 25 and 26, 1900.

The Treatment of Rheumatism With Gold Salts*

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The "rheumatic diseases" coupled with that inclination to include "predisposition to disease," has been and still continues to be one of our great medical, economic and social problems. A glance at the edifying data recently compiled in a survey in Massachusetts will surprise us at the magnitude of the disease. It is shown that as many as three per cent of the population is suffering from "rheumatic disease" in one form or another, and that the total number of such patients exceed those affected with heart disease, cancer, tuberculosis; the first, third and seventh leading causes of death in the United States. In disability, partial and total; temporary and permanent; and morbidity; rheumatic disease is second to none. Translation into monetary figures which we all appreciate, can be done by saying that it is far more of a financial drain on our economic order than is syphilis, and the latter disease has been estimated to cost four hundred thirty-six millions per year; roughly about one-half billion dollars.

The etiology of rheumatism is still somewhat of an enigma. It has been associated with the inherited group of diseases but it really seems a stranger to this family. The bacterial factor has been studied with much energy and rewarded with a great deal of accurate data and an abundance of suggestive evidence.[1] General body changes incident to wear and tear of an active profligate spending of body economy, has come in for its proper invoicing.

The countries older than our own have well established organizations contributing much to the solution of the various angles of this debilitating disease.

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*Aurosol:—furnished through courtesy of Central Laboratory and Bruce Ellis Drug Co., Little Rock, Ark.

The etiology being variable has contributed to hesitancy in establishing a comprehensive as well as concise classification. Whether atrophic and hypertrophic arthritis is but a different phase of the same disease or a different disease, will surely yield to investigative studies. The diagnosis of rheumatism means something to the lay mind, yet is hardly considered concise in scientific medicine. It is the hackneyed word of our office discussion and carries a meaning that rarely draws comment. With this explanation the term "rheumatism" will be used in its general broad lay sense.

The patient, who is the major object of our studies, is interested not in cause but effect. He is probably fully aware that cases differ and require different treatment, but they are unanimous when improvement follows medication. Various lines of treatment have flourished only to fade from time to time. The correction of cause has been one goal, while the prevention or correction of contractures and deformities has been another. The achievement of either has been difficult with the odds frequently favoring the latter.

The use of gold salts has been in practice many years. Various solutions and compounds have been formulated. Their European popularity is going strong, Forestier[3], of Paris, after a wide experience of six years, is convinced of the efficacy of gold in the treatment of arthritis. It is his opinion that the salts are active in inflammatory arthritis and not dependent on the period of evolution of the disease. True rheumatoid arthritis, in its more serious forms, or at the beginning of its evolution, when swelling of the joint has just appeared and from then on to the distortion and ankylosis and even muscular atrophy is amenable in a greater or less degree to the gold salts. Focal infectious arthritis of the oligo or mono-articular form without definite relationship to the primary organism, or the attenuated forms of tubercular arthritis, or that uncommon yet common ankylosing spondylitis between the facets of the spine, infectious in type and frequently calcifying, may respond in a marked degree to the generous use of gold salts over an extended time.

This series of twenty patients, though small, has presented a varied medical problem. Each was convinced that he or she was suffering from "rheumatism" and held a rather pessimistic view of future improvement and discounted to a large degree the doctor's optimism. A grouping of these cases has been made in a rough general way rather than on a technical histo-pathologic classification. The medication used has been a compound of gold given intravenously. The results are based on accurate observations and records, the patient's optimism and statements, together with the follow up over several months during which recurrences or relapses might be noted.

There were six cases in the first group who presented a history quite similar in major points. The physical findings were minimal for gross change. Tucked away in the history of each case was a thorough search for foci of infection. Tonsillectomy had cleared the throat of osmotic lymphoid tissue and replaced it with a kindly scar. Sinuses showed no definite pathology following careful study locally and with X-ray. Dental defects were corrected, even to extraction of any or all diseased teeth that would not yield to treatment. Gallbladder studies were made where indicated. Careful studies were made relative to colopathy. The X-ray was used for each case. The stool was studied for parasites and streptococci. From the allergic angle studies were made of foods and an extract of feces. The former usually proved negative while the latter presented some interesting data to be reported in a subsequent study.

A short history of one case will exemplify the histories of the others:

Miss G. W. C. C. Definite aches and pains of rheumatoid or neuralgic type along lower part of neck and upper part of chest radiating out and involving left shoulder and upper arm. The fingers on right hand are painful and stiffened, little or no swelling. The right knee pains on walking, especially when twisted or jerked, as on stumbling. The aches and pains are distressing, even crippling, wave in intensity from time to time, present day and night and never really gone. Intensified when humidity marked.

H. P. I. The above symptoms carry back about four years. The course has been progressively worse. At no time was there a history of acute rheumatic fever, nor has she been confined to bed but for a few days at a time. Different joints have pained at different times, always polyarticular and small as well as large joints involved. The distress in right hand handicaps her clerical work. During the remissions the stiffness fades and suppleness returns to a large degree.

P. E. Well-nourished woman of fifty-six years, station good. Gait restricted due to pain in right knee and leg. Left shoulder painful on motion, some tenderness. Fingers slightly swollen and quite tender, motion limited, no effusion of joints. Righ knee tender and painful. Extremes of motion very painful.

General examination: Teeth good condition, sinuses negative, tonsils gone, throat not congested. Lungs negative, heart action good. B. P. 120/65, pulse 76, sclerosis mild. Kidneys negative. Intestines sluggish. No hemorrhoids. Pelvic structures negative. Laboratory findings negative.

Therapy: She was started on gold salts by vein, 3 c.c. for first dose, no reaction. Second dose 4 c.c., third and fourth doses 5 c.c. time interval five days. Definite improvement noted. The fifth dose was 8 c.c. to provoke mild reaction. Temperature ran 101, symptoms exaggerated but all faded within three days and improvement progressed much more rapidly. Two more doses of 5 c.c. each were given. Patient symptomatically recovered. There has been no recurrence during the eighteen months since treatment. Patient carrying on her clerical work.

The other patients of this series showed some variations in response to gold salts. One obtained the same improvement from 2-3-4-3-4 c.c.s at five day intervals. Another received 6-7-8 c.c. with a moderate reaction and definite improvement. Another received eleven injections with a mild reaction following second dose when 4 c.c. was injected. His dose has not been increased above 7 c.c. but has been carried over a longer time. His distress has faded and he reports feeling better than for years (his condition started some eight years previously).

The second group represents six cases similar in many complaints to the first group. The history is shorter and a much more evident infectious relationship exists. Effusion into the joints occurred but subsided. The clinical picture of acute rheumatic fever did not develop. Different joints were involved including large and small, knee and hands and feet. The effusion showed in the knee joints. The history of one case will be exemplary of all except for slight modification.

Dr. S. — C. C. Pain and distress in right knee of six months' duration. Being a dentist it interfered with his getting about the office and annoyed him at night, could not get knee comfortable although supported by pillows. Sleep disturbed. Condition slowly progressive until incapacitating. Walks with a cane but would not use crutch. Says he notes effusion into the joint and evidence of low grade reaction. Has used quite a list of therapeutic agents.

P. E. The right knee is moderately swollen, slight blushing of skin, increased warmth. There is pain and tenderness along line of semi-lunar cartilages. Pain exaggerated when structures put on stretch or twisted. There was puffiness above and below patella which carried the physical findings of fluid in joint. X-ray confirmed the fluid and the reactive change on part of joint tissues, (arthritis with effusion). The foot and ankle were sore and tender but showed nothing more. The general examination was essentially negative. The only possible focus of infection was the sinuses and nothing positive could be found.

Therapy: He received 4 c.c. of gold salts by vein as the first dose. He reported a week later stating no systemic reaction followed the injection, but that the pain and distress was less and he could sleep without interruption. He was not so clumsy about his office. No apparent change in quantity of fluid in joint. Received 6 c.c. gold salts as second dose. During the week the pain faded to a marked degree and he had almost forgotten about the unsteadiness of the joint. Twishing or jerking of joint provoked pain. Absorption of fluid was in progress, inflammation subsiding. He was given three subsequent doses of 8 c.c. each. Symptomatic recovery complete, and somatic improvement satisfactory. Treatment discontinued with advice to return on first provocation. Has noted no evidence of return during the year interval and carried on with his work.

Others of this series showed slight modification. Two patients showed some evidence of an acute process and effusion with a prompt response to treatment using full dosage of 7 to 8 c.c. Another was an older person with longer course and more effusion, requiring more medication and over longer period. Another felt better in response to treatment, but would get out and traumatize the knee with an increase of effusion. This occurred four times during which he received fourteen doses, or a total of 105 c.c. Recovery satisfactory and patient has been at his usual work as machinist for nine months without distress. Another had a flare up ten months subsequent to course of six injections at which time two teeth were extracted. Three more injections quieted the arthritic distress.

The third group carries four cases unduly familiar to any one treating rheumatism. This is the group that Sir William Osler, that sage of the healing art, forgot himself for the moment and said, "When he saw these poor suffering persons coming into his office he felt like jumping out the rear window, so little could be done for them." These are the battered, twisted, drawn wrecks of which at one time was a lithe, smooth running human being, "even as you and I." The tenacity of life, the smile to efface pain and distress, the adjustment to cruel handicaps, the pleading for a recess from tortues, is burned in our memories with a blue hot brand.

The examination shows most bizarre contractures. The digits may look like anything else than supple appendages. The joints may be enlarged or shrunken, ankylosed or partly flexible. The synovial membrane may have faded only to permit pathologic bone contact like a dry sandy hinge. The exostoses and osteophytes may lock the motion at only a fraction of what it should be. The spinal column may be rigid, even the neck may be stiffened. The general examination is in tune with the osseous pathology.

In all frankness it seems the greatest goal with such cases as the above is to relieve the morbidity and bring a little comfort into a pain racked existence. These patients for the most part have gladly sacrificed every possession for relief and yet a cruel fate brings them to some charitable institution. Their kindly cooperation usually wins them a most generous treatment.

These patients all received gold salts in full dosage over long periods of time. One patient received forty-two doses over a period of eight months. This was not given in series but continuously. During this time patient was enabled to be up and about in wheel chair, to feed himself and light his pipe. His distress seemed much less (subjective symptoms), the radius of motion of arms and hands increased, but osseous changes were very questionable. Other patients of this group not so badly crippled are still carrying on without resorting to the bed or wheel chair. They are still being carried on the gold salts therapy. They do not want it discontinued. Substitutes have been tried but they ask to be put on the "red medicine." No contra-indications to its use have appeared even after forty-two doses.

The fourth group represents a slightly different clinical picture. Let me illustrate by presenting an exemplary history:

Mrs. C. R.—C. C. Patient suffered severe and excruciating pain along left arm and shoulder extending downward to fingers of left hand. There was exquisite tenderness of skin and soft tissue. Pressure of even lightest dressing was distressing. This pain was continuous day and night. Sleep disturbed, appetite faded and patient generally depressed. There was no history of chill and the temperature did not go to 100. Local applications were applied and sedatives administered. The barbiturates took the keen edge off the pain, while one-half grain of morphine by mouth made her a little more comfortable. It was soon necessary to resort to hypos using one-half grain morphine three times a day.

The patient was visited in consultation five days after beginning of illness. The findings are essentially indefinite except for the subjective symptoms as stated. The history records an attack of cholecystitis some fourteen months previously, a lacerated perineum and cervix with laporatomy five years previously. Recovery satisfactory. The left arm was slightly reddened, little or no swelling, some warmth, exquisitely tender and very painful, and even resting on the softest type of pad. Examination was limited because of severity of pain. It seemed the pain was more distinct along the course of muscle-spiral nerve although redness was absent.

Treatment: She was given 3 c.c. gold salts by vein. The morphine was reduced to one-fourth grain dosage and the barbiturates started again. During the next forty-eight hours there was some abatement of the sharp pains and the nights were more restful. The second dose of 6 c.c. was given forty-eight hours after the first. The larger dose was deliberately chosen that a febrile reaction might be provoked. Within eighteen hours the temperature reached 102½, remained so for six hours and slowly receded to normal. With subsidence of temperature and reaction, the pains faded to a marked degree. The sedatives were discontinued and patient slept soundly. Three days later she received 4 c.c. gold salts, no reaction occurred. Improvement continued and five days later patient going about her duties as usual. Four additional doses of gold salts were given at five day intervals, dosage 5 c.c. No reaction. Somatic relief complete. No recurrence during sixteen months' interval.

Another of this series had a parallel condition except that the gold salts was started forty-eight hours after first distress. She responded to three doses of gold salts. Another complained of distress along the left sciatic nerve. This was treated early with prompt response. The fourth patient located the pain along the left lumbar region, down the sciatic nerve to popliteal space and on to ankle and foot. He had suffered about a year. Subdural injections unsatisfactory. Large doses of sedatives were used. This patient had no reaction following first two doses of gold salts. The third was purposely increased to 8 c.c. This provoked a febrile reaction, coming on some eighteen hours after the injection and lasting a like time. No alarming symptoms noted. Improvement started and patient asked the next doses large enough to provoke reaction. He received six subsequent injections of gold salts without reaction, but with complete somatic relief. He has remained free from distress during the year and has carried on an active, vigorous life.

CONCLUSIONS

1. It seems that such a small series of cases and purposely considered from the clinical and therapeutic aspect rather than the scientific histo-biologic evidence, should warrant only suggestive conclusions. We believe that rheumatism (arthritis) is a general systemic disease rather than of joints alone,[4] and that biologic imbalance is associated with infection, metabolic deficiency, circulatory instability and probably vitamin dyscrasias.

2. That the intravenous use of gold salts was effective in relieving the pain and establishing symptomatic recovery, especially during the acute and subacute stages and contributed much to general well being of the chronic long drawn out case.

3. The response to treatment with gold salts during the earlier phases, with the prolonged quiescent phase, strongly suggests that they

may play a large role in preventing the pain racking deformities so characteristic of this disease.

4. The symptomatic recovery of patients in group I, II and IV, together with the marked decrease of suffering in group III, more than warrants a wider use of full doses of auro therapy in our rheumatic (arthritic) cases.

5. It is our contention that the good results following heavy metal therapy is dependent in a large measure upon the surface tension of atoms together with the quantity of metal in suspension.

6. From this small series it seems that "Aurosol" carries sufficiently minute dispersion of gold to provoke a beneficial reaction in the rheumatic.

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The Gall Bladder Problem

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Probably no other organ of the body is productive of so much controversial opinion as the gall-bladder. So often exhibiting anatomical variations, especially in regard to its blood supply; its functions probably not completely understood; pathology which is most intriguing; clinical manifestations and diagnosis often presenting considerable uncertainty; and, lastly, with opinions concerning therapeutics quite frequently opposed; this organ, indeed, presents many problems. This is unfortunate; because it probably ranks second to the appendix, only, in diseased conditions of the abdominal cavity.

The cat has a double gall bladder, also the lion. The dog possesses normally an accessory cystic artery. The human gall bladder not infrequently shows anatomical variation. Developmental defects such as congenital absence, bipartate gall bladder, etc., may occur, but probably the most important, because of its frequency is anomalous blood supply. Ogolvie(1) states that in 25 per cent of all cases the arteries or their branches show variation from the normal. This, indeed, is a most important consideration for the surgeon. To be forewarned is to be forearmed, and by realizing this fact many calamities may be averted. The gall bladder may show variations in size, shape and position. With exception of the first, extrinsic causes are frequently present. Adhesions may cause distortions in the contour or they may cause it to assume an unusual position. The contents have much to do with the size but may also influence its shape. In asthenic patients the gall bladder may be situated very low in the abdomen, while in sthenic individuals the reverse may be found.

The most outstanding pathological considerations are inflammation, calculus formation and benign or malignant new growths. In many instances, too, it would seem that these three conditions are more or less dependent on one another. Acute inflamation often results from infection of some nature and it would seem that chronic inflammation results, in many cases, from one or more acute attacks. Whether stone formation results from infection or the infection from the calculi may be problematical. But, like the question of which was first the chicken or the egg the results are the same. I believe there is no question, but, that the presence of stones may not infrequently be the cause of malignancy in this organ.

While acute inflammations may be of great severity and gravity, many cases are mild or of moderate severity. They usually clear up; at least clinically, but, often with the cause still present or prone to return, they lead to that very prevalent and often very distressing condition, namely chronic cholecystitis. This is a condition which the physician sees very often indeed. Associated with clinical manifestations of very mild character, or with symptoms so severe and distressing as to produce almost complete invalidism the physician is faced with a problem which not infrequently may tax his ingenuity and skill. All diseased ball bladders cannot be removed; nor, if they could, often it would not be advisable. The close association of the gall bladder, the ducts, and the liver itself not infrequently determines that trouble in one part may also mean trouble in other parts of the biliary system, especially if associated with any degree of blockage, and particularly if this blockage is in the common duct. In fact, I have heard noted surgeons remark that they do not like to remove a diseased gall bladder without drainage of the common duct at the same time. This recognition of the extension of the diseased process to other parts of the biliary system often is the determining factor in successful gall bladder surgery.

In repetition, then, the problem of knowing the condition of not only the extent of the diseased process in the gall bladder but, also, in other parts of the biliary system, is a most important one.

The most useful gall-bladder test devised, to date, is its visualization after the administration of a dye which is concentrated in the gall bladder. But this concentration, this organ may be seen and the degree of mucosal function determined, by the relative opacity of the shadow cast. Conversely, with a diseased lumen the shadow cast will be very faint or absent. Provided the technique has been satisfactory, the absence of a shadow suggests a pathological gallbladder. The dye most commonly used is sodium tetraiodophenophthalein. It may be administered orally or introduced into a vein. There are many advocates of both methods and preponderance of evidence seems to demonstrate that there is very little, if any, degree of accuracy in one over the other, of the two. Under such circumstances it is usually wise to choose the oral route. The intravenous route frequently causes a severe reaction and there has been an occasional fatality by this method of introduction. It has been my good fortune to have been able to perform this test many times. At first, I used both methods; sometimes in doubtful cases, both methods in the same patient, in rechecking evidence. While I have no statistics to offer I am of the opinion that the accuracy of the two is about equal.

The accuracy of this test per se, might approximately be placed at about 80 per cent in all cases. Used in conjunction with clinical manifestations and other data it is, indeed, very valuable. In questionable cases it is well to repeat one or more times if the condition of the patient will permit. It should be used very carefully when opposed to other data. When calculi are present the shadow cast is either positive or negative according to the type of stone present. Filling defects are sometimes observed suggesting papillomas or other form of new growth.

The fact that the gall bladder mucosa has the power of great absorbability has lead some observers to doubt whether the gall bladder ever empties itself. However, despite such great absorbability it probably does possess a certain degree of contractibility, imitated by the hormone, cholecystokinin which causes it to empty at more or less infrequent intervals. It seems to me that there is yet considerable data to be determined in regard to this mechanism.

How much value this test has in regard to liver function is also problematical. Some observers believe that most of the dye is taken out by the liver cells and reaches the gall bladder by biliary passage routes, others believe that the gall bladder mucosa possesses a selective action on this dye and therefore absorbs it directly. If the former view is correct the test may also be a good means of determining liver function. Which ever view is correct, the practical value seems to be mainly in that concerning the gall bladder, alone.

Carefully done, and by those capable of determining the results, gall bladder drainage with a Rehfuss or other duodenal tube is a very excellent means of securing data relative to the biliary tract. Isolating and determining the character of so called A, B, and C, bile gives a means of knowing with a nice exactness the contents of the system under consideration. It is surprising that this method does not give, to the average, more exact information than it does. Probably in time it will. At present, it seems that those who specialize in gastroenterology obtain the most value from this method. The presence of a reddish pigment in the latter bile collected is supposed to indicate gall bladder pathology

Because of the association of the gall bladder and the rest of the biliary passages, as much concerning the latter should be determined, in so far as may be practical. Many tests concerning liver function have been devised; most of them have proven of very little value. Most of them have as a basis the ability to secrete a certain form of dye, or the ability of the liver to carry out its known functions. Tests of hepatic functions along these lines includes those concerning pigments in the blood, such as the icterus index and the Vandenberg reaction.(2) Tests concerning metabolic functions of the liver, such as the nitrogen partition and the levulose and galactose tests. Tests concerning autitoxic powers such as the glycuronic acid and the indican tests. Hemopoietic tests, such as blood coagulation, fibrogen content, blood lipase and Widal's hemoclasic crisis.

Between cholecystostomy and cholecystectomy the choice is usually the latter; but here, indeed, the individual case must determine. There are indications for both. Recently a few cases of fatal atrophy of the liver following cholecystectomy have been reported. Such cases are, fortunately, relatively rare, but enough have been reported to cause speculation. The indication may be for emptying the gall bladder into another viscus such as in cholecystogastrostomy or cholecystoduodenostomy. Whatever the selection of remedial procedure, probably the most important aspect is to determine, in so far as possible, not only the condition of the gall bladder, but also the condition of entire biliary tract.

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THE MISSISSIPPI DOCTOR

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State medicine is on nearly every tongue at nearly every medical association. We are looking for it and at the same time hoping we will never see it. We do not believe it is a true friend of the doctor nor of his clientele. Much has been said and written on how to stay it off. The one single specific has not been discoverer yet. By-laws, constitutions and resolutions will not solve the problem, not alone. Organized effort on the part of the profession might become powerless because where there is one doctor to work there are eight hundred people to be served. They need the service even worse than the doctor needs the job, for he could do something else for more profit, perhaps. The income for the rank and file in the profession is far below what it deserves to be. The people would like to have more service for less money. The public pays higher for other service with a smile than they do for medical as a rule. The medical profession has been so busy learning medical facts that it has not taken much time to sell the valuable information to the public. But since the doctor needs more money to buy more equipment and to learn more facts to render better service, it might be well for him to give a little more attention as to how he serves his service. If we are to keep away from state medicine, the people must think that they can get better service for less money from an independent profession. We feel sure it is true, but our clientele may not think so. Doctors need to be practising preventive medicine more than they are and getting pay for it. The profession might do well to do a little more educational work. To help to do this, to give them much better service for the same or just a little more money, every general practitioner would do well to employ a registered nurse to help him, every clinic and every hospital a hostess. Get the office clean, invest in equipment, stock a little library for the benefit of your patients while they wait. Take case histories, examine every patient, study the patient in her relation to her environment, carry a nurse on your obstetrical calls, send your nurse on one hour nursing calls. Teach the people the value of your service and teach them to pay for it. But make it so good and so pleasant that they will not want any change. It can be done. It is not time to sit down and sit for state medicine, it is time to get up and get away from it, so far ahead that it can not catch up.

Dr. Harvey F. Garrison, Councilor in Mississippi for the Southern Medical Association, and President of the Mississippi State Medical Association, has issued a call to the Presidents of the State Medical Associations in the seventeen states composing the Southern Medical Association and the District of Columbia for a conference during the southern Medical Association meeting in November at Baltimore. The purpose of the conference is to have discussion and study of the problems confronting the Presidents of State Medical Associations and especially of the Southern Medical Association as concerns improvement of program and building up of membership. Much benefit should come to the Southern Medical Association from this group meeting, discussion, and judgment. Recently Dr. Garrison visited the offices of the Southern Medical Association in Birmingham and was in conference with Mr. C. P. Loranz, Secretary-Manager. Mr. Loranz promptly approved the idea and suggested that the conference have a dinner session and be entertained by the Southern Medical Association. Dr. Felix J. Underwood, past President of the Southern Medical Association and member of the Board of Trustees, will be the principal speaker on the occasion of this special meeting. Presidents-elect are invited to attend.

You will read with much interest and profit the paper of Dr. Straatsma, of New York, on plastic surgery. The Mid-South was delighted to have him at its last meeting. Plastic surgery made rapid advance during the World War. Shot, shell, and explosion played havoc with the normal human anatomy, especially that of the face. The war of the automobile has now taken up where the explosives of two decades ago left off. Thirty-six thousand per year need no plastic surgery except by the undertaker. But the hundred thousand disabled and the million more with injuries are making plastic surgery one of the big fields and its permanency seems assured for many years to come, as long as you have the concoction of human selfishness, whiskey and gasoline. Plastic surgery is playing a big role in our human economy. Insurance companies should be greatly interested in its development. The plastic surgeon can save the insurance company its thousands and at the same time leave the injured much better satisfied. The injuries on the surface anatomy are often times not to be compared in seriousness to the mental depression caused by the morbid anatomy of the brain, like King Lear's storm. It is hard to imagine what you are doing for the patient in reality when you restore an ear, rebuild a nose and do a nice repair to a face. Dr. Straatsma is an artist in his special field and we are delighted to give his paper to our readers.

When you go to Johns Hopkins you can not but think of Sir William Osler, the great clinician, the real father of modern clinical medicine. No one seems to know, does not yet, the clinical symptoms as did Dr. Osler. His teachings will constitute the Clinical Bible of diseases for many years yet to come. He was an impressive teacher, a lucid writer, a charming personality. A Canadian by birth the son of a minister of the gospel, he gave his best service, perhaps, to Johns Hopkins and the University of Pennsylvania. He died in Oxford England in 1920, at the age of seventy. He was said to have remarked, jokingly, that when a man was sixty he should be chloroformed. Unfortunately this remark was not productive of good. We are beneficiaries of most valuable medical information furnished by him after he passed his sixtieth mile stone. And furthermore the truth is that "if a man keeps mentally and physically fit he is worth more to human society every day that he lives although he live to be a full hundred."

In the death of Miss Catherine Kent, of Jackson, the nursing profession lost one of its most faithful nurses and a very valuable organizer in its earlier history.

The Mississippi State Medical Association feels very sad over the untimely death of Dr. William A. Dearman, of Jackson, and Whitfield, formerly of Gulfport. In internal medicine he was the Osler of Mississippi. He was able, he was thorough, he was a close student. His fine intellect was balanced with a tender and a considerate heart. He was most highly respected by his fellows in the profession. They respected his ability, they loved him as a friend. They loved to do him honor. He was a valuable leader in organized medicine. We shall miss his familiar face, his brilliant discourses, and his hearty hand shake at the meetings in the future. Would that he had really known the interest his fellows of the profession had in him, their love for him.

The Wallace Sanitarium, of Memphis, recently completed a fifty thousand dollar annex to their already commodious and well equipped structure. On October 19th at five-thirty they entertained the Shelby County Medical Society with about twenty-five out-of-town guests. We deeply regret that we were unable to attend. Reports are that the dinner was greatly enjoyed. During the stormy times of the last few years, nerves have been shattered, "depression psychosis" has greatly increased and this great institution has had its part to play. It keeps to the forefront and always does its part exceedingly well. We cordially congratulate Drs. Wallace, Priddy and Schmid.

On Friday night, October 31, the Houston Hospital paid tribute to the fine service of Miss Ann Sanders Tansel with a nice banquet. It was good to be there. The finest tributes we have ever heard were showered upon her. Her efficiency and her kindness of heart as a head nurse were on the tongue of every one.

Dr. Felix J. Underwood has been leading a program to inform people on public health, the work of the State Board and the importance of preventive measures. You may depend upon him to keep to the front in public health endeavors. No state has a more efficient public health official.

Dr. Frank Acree, of Greenville, will give a dissertation on malaria at the Southern Medical Association at Baltimore. It will be well worth your time to hear it. Frank digs to the bottom of his subject. His mind is keen and enduring.

It is all right to look at the tongue of every patient, it is still more important to examine the breat, the cervix and the rectum of every female presenting herself for an examination. And herein every practitioner needs a trained nurse in his office.

The mosquito bite may give you malaria. The spider bite may prove very serious. Some snake bites are very serious and the serum against same is very expensive. The dog bite and the serum against same is very expensive. The dog bite may cause hydrophobia unless you take the anti-rabies treatment. The rat bite may cause rat bite fever. But of all bites the human has to fear is the human bite. It is said that every human mouth carries a hundred different organisms. So the wound from the human bite has a variety of bacteria from which to choose. It might be the fusiform bacillus, the streptococcus, or the spirochete. Fortunately the ferociousness of the human race is becoming a bit attenuated, and total extractions are in good medical taste. The grinding bruise of the human bite furnishes a wonderful well prepared soil for the tasty bacteria that might be next in line. The finger seems to be the location of the most serious consequence. The early and liberal use of the electric cautery seems to be the most effective treatment.

We deeply regret the untimely passing of Dr. John Chamberlin, of Natchez. He was an able surgeon and a man of sterling traits of character.

On to Baltimore to the Southern Medical Association, 17th to the 20th inclusive. It will do you good to breathe the medical atmosphere of Johns Hopkins.

Dr. Seale Harris now has associated with him as a partner his son, Dr. Seale Harris, Jr., and the profession of the Mid-South is delighted.

Cancer leads the march in human deaths. as yet we do not know the cause. We know something of the treatment.

We are having many more cases of amoebic dysentery in Mississippi than we have thought, it is quite certain.

There is no question but that Crawford W. Long, of Georgia, was the first to use ether as an anesthetic.

For every practitioner a registered nurse to help him to practice his profession more proficiently.

No one thing is of small importance in the practice of medicine.

The practice of medicine is to give close attention to every patient and to every detail.

In this editorial, I shall deviate from my usual plan of bringing to the attention of the readers of The Mississippi Doctor the high points of the meetings of the state association of the years long gone by, and shall refer to some more recent happening in Mississippi medicine.

On Wednesday the twenty-first instant, I attended a meeting of the North Mississippi Medical Society in Oxford. This meeting was held in the graduate building on the University Campus. It was, in every sense, a successful and notable meeting. The program was one of the best I have ever attended. Dr. Robert A. Strong, of Tulane (who, by the way, is a bona-fide resident of Mississippi), appeared twice on the program. He gave two of his regular post-graduate lectures that he is delivering in different sections of the state, under the auspices of the Board of Health, Tulane University and the Common Wealth Foundation. No one who has not heard these lectures can appreciate them and evaluate them properly. They are splendid in the fullest sense of the word. While they represent all that is modern and scientific in pediatric practise, they are extremely practical and simple. The doctors and the public in Mississippi are very fortunate, indeed, in having this splendid course of lectures made available. I fear that they are not properly appreciated. There is no longer any excuse for doctors not to keep abreast of medical progress. And this can be done, only, by constant reading and attendance upon medical meetings. Of course we must keep open minds and be ready to accept new teaching and discard old theories and practices. I do not mean by this that **all** new teaching must be accepted and **all** old practices must be discarded. But I do mean that **much** of both and new and old teaching is "the bunk," and I pride myself in the thought that I am one of the most reckless "debunkers" in our ranks. (Please pardon the personal reference). Dr. W. A. Evans had a place on the program. It is needless to say that he was both instructive and entertaining. Dr. Evans is one of the nation's celebrities. He has won this distinction by hard work, close study and analytical thought. Dr. Evans discussed the problems that we must meet and try to solve that will confront us from now on in connection with so-called "infantile paralysis." This discussion was full and logical. He frankly stated that some of his teaching was based on proved facts while some was based on conjecture. He said that there is little that is positively known about this disturbing malady and much that is yet to be learned. But he stated, most positively, that it is, possibly, the mildest of all infectious or epidemic diseases. He did not refer to treatment or prophylaxis. I am glad that he did not; for sins enough have already been committed along these lines. Let us first discover its true nature and cause, then all else will be added in an orderly and effective way.

I think the best dissertation I have ever heard on circulatory failure, was made by Dr. Motley, of Memphis. Dr. Motley is one of our younger men, but I hail him as a coming man, of these parts. If and when, his paper shall appear in The Mississippi Doctor, please read it carefully and thoughtfully. You will be helped by so doing, unless you are so young that you think you know it all or are so old that you are unwilling to part company with some of your long cherished, but erroneous, fancies. But whether you ever see this paper or not, please take it from me that it is folly to whip a failing heart, whether it is due to loss of blood, toxemia, or any of the many causes of "heart failure."

The last place on this, really great, program was taken by Dr. Moore, also of Memphis. Dr. Moore is a brilliant young man who has chosen urology for his field of labor. His presentation was full and elaborate and if read before a group of urologists would have been entitled a place of high honor. It was, in my opinion, rather spectacular and dramatic—nevertheless the general practitioner, very much needs just such information as his paper carried. Such papers, at least, tell us where our patients may be adequately and properly treated. And best of all, we are put on our guard against the great risk of failing to diagnose our cases in time for them to obtain the attention to which they are entitled and so much need.

Let me repeat, and emphasize the statement, that I do not believe **any** doctor has the right to absent himself from such meetings as the one I have mentioned. What is distance, loss of time and expense when compared to or with the information you are sure to get and so much need?

And in conclusion I will say that I was both shocked and pained at the small attendance upon this meeting. I was struck by the absence of men who live in close proximity to the meeting place. Since moral obligation will not compel attendance, I regret that there is no way to establish legal obligation for such attendance. When advised by friends against waste of time in preparation, John Milton replied, "I care not how late I come into life so I come prepared." No doctor will ever be **fully** prepared to meet his obligations to his clientele and to his profession until medicine shall have been established as a fixed science, but this does not release him from the obligation to strive as best he may to attain the highest degree of perfection possible.

G. S. B.

ALONG THE MEDICAL HIGHWAY

First Use of Ether

For almost a hundred years there has been more or less discussion and more or less argument and disagreement as to who first used ether as an anesthetic. It seems well established, however, that the distinction belongs to Dr. Crawford W. Long, of Danielsville, Ga. But just within the past few days there has been a renewed discussion of the old contention and authorities seem to differ on the historical fact. The weak spot in the claim for Dr. Long is that he did not advertise it, did not proclaim it to the world. He was a modest physician in a small town and was satisfied with having made a great discovery and did not realize at the time how vitally important it was to pass it on to others. It is important as a matter of history and truth that this matter be established as it should be in favor of Dr. Long. The next man after Dr. Long to use ether, sofaras research has established the facts, was Dr. Morton, a Boston dentist, who brought it to the attention of Dr. John Warren, professor of Surgery in Harvard. Dr. Morton urged the use of ether. Dr. Warren agreed to try it but did not believe it would work. Dr. Morton administered the ether. Dr. Warren performed the operation. It was successful. That operation was performed in October, 1846 after Dr. Long had used ether in March, 1842. The Times-Picayune, of New Orleans, had an editorial on this subject recently which we pass on to our readers as follows:

CREDIT FOR ANESTHETIC

Through his ministrations to the Dionne quintuplets, Dr. Dafoe has become the shining exemplar for all country doctors, but a far greater one, an outstanding human benefactor, is being done a curious and inadvertent injustice by posterity. He was Dr. Crawford W. Long, of Danielsville, Ga., who first used ether as a general anesthetic, according to several standard reference works. The injustice comes about in a curious way, through an appeal sent out by the United Hospital Fund of New York, and signed by scores of high officials, governors, leaders in the medical profession and other notables. The appeal asks aid for philanthropic hospitals, but its stated occasion is "the 90th anniversary of surgery made painless through the use of anesthetics." Amply attested records show that Dr. Long used ether for surgery in 1842, or four years earlier than the accredited date.

The hospital fund plea sets forth that the first public demonstration of the use of ether in major surgery took place in the Massachusetts General Hospital, Boston, on October 16, 1846, which is correct but does not serve to clarify the situation. Incidentally, the operation in Boston was performed by Dr. T. G. Morton, a dentist and practitioner. It was on March 30, 1842, that Dr. Long removed a tumor through the use of ether, and later in that year he reported that operation, and similar incidents of his practice, to the Georgia State Medical Association. Two encyclopedias say, however, that until after the Morton announcement he did not publish his findings to the world, and possibly this is true in the technical sense, though Georgia research workers question it.

Each year in the little town of Danielsville, and also in Athens, Ga., where Dr. Long practiced, his anniversary is celebrated, but the observances are scarcely more than local. He did not rise to fortune or achieve any great fame through his discovery, but there is no evidence that he felt rancor toward his rival. He lived and died a small-town doctor, doing the best he could for his patients.

So well has the claim of Dr. Long been established that a monument or marker has been erected on the spot where he performed his first operation under ether. And just the other day a Bronze Plaque of Dr. Long was completed by Steffen Thomas, Atlanta sculptor, to be presented by the Southern Society of Clinical Surgeons to the Royal College of Surgeons at Edinburgh, Scotland, honoring Dr. Long as the man who discovered ether as an anesthetic. Well, after all, what difference does it make, you may say. It simply makes this difference: That the TRUTH has a right to stand without contradiction or attack. This old country doctor of Georgia, long gone to his final rest, deserves to have his name perpetuated in the archives of medical history as the man who first found out how to perform painless surgery. Its discovery, like many other great discoveries, was, in part, accidental. A bunch of college boys on a frolic were using ether for the effect it had on them when Dr. Long observed that in their scuffles, their fights and falls, they felt no pain while partially under the influence of the ether. He took the lead. He had the brains to work it out and the skill to use it. In the past century the South has suffered much from the errors of history and from the lack of recorded facts. We should insist upon this truth.

From Harvey F. Garrison

To the officers of the Medical Societies and the medical profession of Mississippi:
My Dear Doctors:

December is the best month to pay dues for 1937 to the local and State Medical Association. I hope that every member of the Medical Associations in Mississippi will make himself a committee of one not only to pay his own dues, but urge the other doctor to pay his as well. A few doctors in each medical society will invariably procrastinate in paying their dues, but if some other doctor, not necessarily the secretary, will take it upon himself to speak to him and urge him to pay his dues, and even if necessary, take the money to the secretary for the doctor, this will be one of the best means in the world to build a large medical society. Every member should go out after the doctor who is not a member, and like in the protracted meetings of old, do "personal work."

This is the type of membership drive that will accomplish the most good, and there is no time like NOW to do the work. The best investment that any doctor can make, is to see to it that his dues for membership are always paid in his medical society. There is no investment in the world that will yield greater dividends than this. Let's make the month of December a real campaign month. Let every member of his society go out after the doctor who is not a member, and get him in!

We have a greater percentage of members in the Mississippi State Medical Association today, than ever before in its entire history, but we can still do better than we have done, if we will put our shoulders to the wheel, and make this membership drive go over in the month of December.

To those of you whom I will not have an opportunity to see before the holidays, permit me to extend to you my heart full of love for your loyalty to me, and also the Season's Greetings! I am,

Sincerely yours,

HARVEY F. GARRISON

Announcement

Dr. Rowland W. Hall announces his association with Dr. James Grant Thompson in the practice of Dermatology and Syphilology with offices in the Standard Life Building Jackson, Mississippi.

To Address Presidents of the State Medical Ass'ns.

DR. FELIX J. UNDERWOOD

Executive Secretary of the Mississippi State Board of Health, who will address the presidents of the state medical associations at the Southern Medical at Baltimore.

American Urological Ass'n. To Meet Dec. 4 and 5

Dr. W. H. Anderson, Editor
Mississippi Doctor
Booneville, Miss.

Dear Dr. Anderson:

I will appreciate it very much if you will announce in the next issue of the "Mississippi Doctor" the meeting of the Southeastern Branch Society of the American Urological Association in Charlotte, North Carolina, Dec. 4th and 5th.

The following men have accepted places on the program: Dr. C. M. McKenna, Dr. H. C. Bumpus, Dr. J. D. Barney, Dr. N. C. Alcock, Dr. Gilbert Thomas, Dr. Alexander Randall, Dr. Theo. M. Davis, Dr. Russell S. Ferguson, and Dr. E. G. Ballonger.

A cordial invitation is extended to all physicians to attend the meeting, which I feel sure will be of much interest to them.

Thanking you in advance for this favor, I am

Yours very truly,

TEMPLE AINSWORTH, M.D.,
Executive Committee Member
from Mississippi

Conference for State Presidents

HARVEY F. GARRISON, SR., M.D.
Jackson, Miss.

President of the Mississippi State Medical Association who will attend the Southern Medical in Baltimore Nov. 17-20 inclusive. Dr. Garrison is very active as state president. He is making many of the local societies, urging the doctors to become members of the state association. He is urging the profession to practice more preventive medicine. He has called a meeting of the presidents of the state associations making up the Southern Medical to meet in Baltimore along with the other meeting. This indicates constructive thinking and we predict much good to come from this getting together.

Resolutions

On Sept. 13, 1936 the Great Physician called our brother practitioner, Dr. A. L. Chapman, of Hermanville, Miss., into his eternal reward.

Therefore, be it resolved by the Claiborne County Medical Society that the medical profession and particularly this society, has lost a faithful and loyal member.

That we will miss his fellowship and loyal council, and the public his services.

To his family and loved ones we commend the Great Physician, who alone can heal a broken heart, and give real comfort and satisfaction in the sad hour.

That a copy of these resolutions be sent to the state medical journal for publication; and a copy be spread upon minutes of this society; and a copy be sent to his family.

COMMITTEE.

MR. C. P. LORANZ
Secretary, Treasurer and General Manager
Southern Medical Association
Birmingham, Alabama

Mr. C. P. Loranz, Birmingham, Alabama, is Secretary, Treasurer and General Manager of the Southern Medical Association, carrying the title of Secretary-Manager. The Constitution and By-Laws of the Association provide that there shall be a Secretary, Treasurer and General Manager, any two or three of which may be combined into one at the discretion of the Council and the approval of the Association. Mr. Loranz holds all three offices and as such is the Executive Officer of the Association. All matters from one annual meeting to another that require decisions pass over his desk. He is the authority from one meeting to another.

The Southern Medical Association was the first medical organization and one of the first professional organizations to select a layman for its executive officer. Mr. Loranz is not a doctor.

Mr. Loranz became associated with the Southern Medical Association in October, 1912 as assistant to the then Secretary-Treasurer, the Executive Officer, Dr. Seale Harris, having the title then of Business Manager but with Dr. Harris as his chief. During the World War Dr. Harris was in France and although Mr. Loranz officially was not the executive officer he functioned in that capacity during Dr. Harris' absence. At the annual meeting of the Southern Medical Association in November, 1921, Dr. Seale Harris resigned as Secretary-Treasurer (Executive Officer) and Mr. Loranz was elected in his place.

Mr. Loranz is fifty-four years old, coming with the Association at the age of thirty. He has, therefore, been connected with the Association for twenty-four years. At the time he came with the Association its membership was less than five thousand. Now the membership is more than seven thousand.

Every moving machine has to have a motor, a current, a dynamo. Mr. Loranz is the moving power behind the Southern Medical Association. In addition to giving it motion and growth, he keeps it warm with heart and soul.

James H. Hutton, M.D.

Hutton, James H.—Member Chicago Medical Society, Illinois State Med. Soc., A.M.A., Assoc. for Study of Internal Secretions, American Assoc. for Advancement of Science, Amer. Editors and Authors Assoc.; fellow Amer. College of Surgeons.

From 1927 to 1931 was secretary, president-elect and president of the Chicago Medical Society, for many years was a member of the Council of the Chicago Medical Society. Helped to organize and for ten years was chairman of the Scientific Service Committee of the Illinois State Medical Society. In 1930 was appointed consulting endocrinologist to the Illinois Central Railroad, the first appointment of its kind ever made.

In 1933 Dr. Hutton announced his disbelief in the pancreatic theory of diabetes and his idea that this condition was due more to hyperfunction of the pituitary and adrenals than it was to hypofunction of the pancreas; that essential hypertension was due in many instances to the same thing; and that in many cases both conditions should be relieved by low dosage of irradiation to the pituitary and adrenals. This idea has been followed ever since with some degree of success, particularly in hypertension.

Russell Landram Haden, M.D.

Medical educator, b. Palmyra, Va., May 22, 1888; s. Clifton James and Nicie Delima (Landram) H.; A.B., U. of Va., 1910, A.M., 1911; M.D., Johns Hopkins, 1915; m. Isabel McLeod Smith of Norfolk, Virginia, October 6, 1917; children—Russell Landram, James Coke. Resident house officer, Johns Hopkins Hosp., 1915-16; asst. resident physician, Henry Ford Hosp., Detroit, Mich., 1916-17; dir. of labs., same hosp., 1917-18, 1919-21; asso. prof. medicine, U. of Kan., 1921-23, prof. exptl. medicine 1923-30; head of dept. medicine, Cleveland (O) Clinic, since 1930. First Lt. Med. Corps, U.S.A., Asst. chief med. service, base hosp., Camp Lee, Va., 1918-19. Mem. A.M.A., Am. Assn. Pathology and Bacteriology, Am. Soc. for Clin. Investigation. Am. Clin. and Climatol. Assn., Assn. Am. Physicians, Phi Beta Kappa, Sigma XI, Theta Delta Chi, Nu Sigma Nu, Alpha Omega Alpha, Pithotomy Club. Democrat. Methodist. Author: Clinical Laboratory Methods, 1923; Dental Infection and Systemic Disease, 1928. Awarded gold medal by Radiol. Soc. America for contributions to dental roentgenology, 1929. Contbr. on diseases of the blood, focal infection and intestinal obstruction. Home: 2673 N. Park Boul. Office: Cleveland Clinic, Cleveland, O.

Letter From Dr. Dorris

Dr. W. H. Anderson, Editor,
The Mississippi Doctor,
Booneville, Mississippi

Dear Doctor Anderson:

I am glad to enclose the check for the Mississippi Doctor subscription and card, for I feel that I am getting more real medical journal for my money than I could possibly get with any other journal.

The Mississippi Doctor is greatly improved, and will soon take its rightful place as one of the outstanding medical journals of the country. It carries such articles as interest the general practitioner and the specialist alike. I congratulate you on its contents as well as the arrangement and readability.

With kind personal regards, I am,

Yours very truly,

J. M. DORRIS, M.D.

Thank you graciously, Doctor Dorris. May your tribe increase.—Ed.

Elect Dr. A. M. Chesney

Dr. Allen M. Chesney, dean of the Johns Hopkins school of medicine, today had been chosen president-elect of the Association of American Medical Colleges. He will assume office next October.

Dr. Loren C. Chandler, dean of the Stanford University school of medicine, was chosen vice president.

In executive session, the association admitted four new schools: Queens University, Kingston, Ontario; University of Western Ontario, London, Ontario; University of Alberta, Edmonton, Alberta, and the University of Southern California, Los Angeles.

WHAT EVERY WOMAN DOESN'T KNOW—HOW TO GIVE COD LIVER OIL

Some authorities recommend that cod liver oil be given in the morning and at bedtime when the stomach is empty, while others prefer to give it after meals in order not to retard gastric secretion. If the mother will place the very young baby on her lap and hold the child's mouth open by gently pressing the cheeks together between her thumb and fingers while she administers the oil, all of it will be taken. The infant soon becomes accustomed to taking the oil without having its mouth held open. It is most important that the mother administer the oil in a matter-of-fact manner, without apology of expression of sympathy.

If given cold, cod liver oil has little taste, for the cold tends to paralyze momentarily the gustatory nerves. As any "taste" is largely a metallic one from the silver or silverplated spoon (particularly if the plating is worn), a glass spoon has an advantage.

On account of its higher potency in Vitamins A and D, Mead's Cod Liver Oil Fortified With Percomorph Liver Oil may be given in one-third the ordinary cod liver oil dosage, and is particularly desirable in cases of fat intolerance.

Pointed Paragraphs About Tuberculosis

Arranged by LOGAN H. McLEAN

Last year 1135 tuberculosis deaths were reported in Mississippi—more than three every day. In five years 1588 deaths from automobile accidents have occurred in the state, 66 from poliomyelitis, AND 6,632 FROM TUBERCULOSIS.

In the campaign against tuberculosis, the keynote is the importance of early diagnosis, a favorite slogan being "Early Discovery Means Early Recovery." In support of this thesis, the following pertinent paragraphs have been assembled.

Tuberculosis is curable, but not by medicine, serum or vaccine! Honest cures are assured when a capable physician directs treatment and begins his part early.—NTA Modern Weapons.

When the average person sees a case of tuberculosis—hacking cough, hectic cheek, glistening eye, and all—it is not an early case, because beginning tuberculosis displays no such signs. Only the trained physician who focuses the modern weapons, such as the tuberculin test, X-ray and physical examination on the individual patient, can actually see the early cases.—H. E. Kleinschmidt, M.D.

Dr. Kleinschmidt points out that, at this state in scientific progress, one would think the majority of cases are discovered early but adds that about five out of six cases admitted to sanatoria are already in an advanced stage.

Dr. J. Burns Amberson, Jr., says that two-thirds to nine-tenths of patients with really early tuberculosis have no symptoms or . . . indefinite and vague symptoms.

Use of the X-ray in diagnosis is urged by many writers.

It was believed that the physician . . . could be trained to detect most early lesions by physical examination alone, whereas now we know that he will miss a great many of them unless he also uses the X-ray.—Amberson.

Tuberculosis is especially prevalent among negroes. The South depends upon them for such services as cooking, milking, washing and caring for young children. Since, as Dr. J. B. Naive points out, the tuberculous negro tends to be more infectious than white people, because his sputum is nearly always positive, the servant is a real menace.

It is suggested by Dr. Naive that all who employ negroes in domestic service see that these workers are in good health. He says that no one should be given employment of this nature without having been carefully examined by a competent and conscientious physician, and that the examination should include an X-ray picture.

Many of the X-ray films sent to the Sanatorium for interpretation are not suitable for tuberculosis diagnosis.—Henry Boswell, M.D.

Dr. Potts is quoted: "Not many years ago the tuberculous were diagnosed to die; today they are diagnosed to live;" but obviously this is contingent upon early diagnosis.

The tuberculin test is a sure way of discovering those persons who have been infected. . . By means of the tuberculin test and the X-ray, we are now able to discover the early lesions before grave damage has been done.—Samuel O. Pruitt, M.D.

If the tuberculin test is positive it means only that living tuberculosis germs are in the body. It does not tell how many there are or if any damage has been done. If the test is positive the chest should be X-rayed to be certain that no harm has been done to the lungs. —NTA The Tuberculin Test.

Routine examinations in colleges show that tuberculosis in young people is a matter of serious concern. The method employed in tuberculin test of students, with X-ray and physical examination of positive reactors.

Lesions are thus recognized at a stage when fairly simple measures bring a lasting cure; also at such an early stage that danger of spread of infection to other students is avoided. The majority of cases detected occur in students who suppose themselves in perfect health.—Esmond R. Long, M.D.

Dr. H. D. Lees, University of Pennsylvania, reports discovery by the tuberculin—X-ray method, of 18 cases of adult type pulmonary tuberculosis of whom all were symptomless. Only one had to leave school. During the same period 16 cases were found among students who came to the doctor because of symptoms. Thirteen of the 16 were advanced cases and were obliged to leave school.

MISSISSIPPI STATE MEDICAL ASSOCIATION
and
COMPONENT SOCIETIES

Maintenance of Relative Asepsis in Abdominal Surgery*

E. E. BENOIST, M.D., F.A.C.S.
Natchez, Miss.

In the maintenance of relative asepsis, nothing stands out more prominently than the careful and studied approach to known areas of contamination, such as bowel lumen. The modern conception of intestinal surgery is to do it as simply and as free from sepsis as possible. To carry out this conception, it is necessary to resort to some trick of the trade that will prevent cutting into the bowel lumen with knife or needle, or carrying sutures into the bowel lumen except where absolutely necessary. This is relatively easy in the closure of the blind end of a length of small bowel. In such a case, the intestine may be ligated with a strong piece of material, severed with clamp and cautery and the ligated stump inverted with a purse-string suture, just as one inverts an appendix stump. Also, in operation for removal of carcinoma of the sigmoid colon and rectum, the bowel is cut with cautery, using the clamp, and ligature, in similar manner. This has been exemplified by two operators, Fred W. Rankin,[1] of Lexington, and T. E. Jones,[2] of Cleveland. These operators sever the large bowel, establish colostomies, and in the second step, remove the carcinoma-bearing portion, without having contaminated an instrument with bowel contents. Jones' second step is extraperitoneal and immediately after the first. These methods, in view of older ones, out of which they are developed, are triumphs of modern surgical art. In line with this conception of bowel surgery, the avoidance of contamination of the peritoneal cavity by material from a hollow viscus, is the pile clamp method of gastrointestinal interanastomosis of A. G. Brenizer.[3] In one of his reprints, he states, "The requirements for an effective gastrointestinal anastomosis are: (1) No soiling, (2) no bleeding, (3) a narrow cuff to be tucked in and to slough off, (4) no incumbrances in the way of retention clamps, packs, etc." Brenizer's method fills the requirement set for aseptic intestinal anastomosis. The details may be found in his several articles, to which the reader is referred. Another very interesting type of aseptic anastomosis is that of Wadhams and Carabbs,[4] In this method, the authors destroy a line of tissue along the bowel loop by means of electrocoagulation, one line on each loop to be approximated. These lines slough after having been approximated to each other and circumscribed by the usual rows of sutures. These two methods of aseptic anastomosis are well worth careful consideration and adoption, particularly in operations on the lower bowel, where chances of sepsis to follow are greater. I have seen a resection of twelve inches of ileum with subsequent side to side anastomosis of the healthy ends, done by the usual rubber-covered clamp method, followed by a most persistent drainage of fecal matter for weeks, through a fistula. This patient recovered after a stormy convalescence. Any rational method that assures avoidance of such damaging and dangerous sequelae is certainly worth trial and adoption. As to enterostomy and colostomy, the only absolutely aseptic method that I know of is the method, long in practice, wherein the bowel is first sutured or otherwise fastened to the abdominal wall, with or without packing around the edges of the incision, and later incision into the bowel itself when adhesions have been formed. This, of course, is applicable to a small number of cases only. In the largest number of enterostomies that I have had, decompression was the pressing need, and the bowel was entered at once. It is surprising how many operators will pull up a loop of bowel, puncture it forthwith, catch spillage over the hands, suture material, instruments and drapes, the bowel content being usually under pressure and highly septic due to intestinal stasis, then insert a tube. For this reason, attention is called to the simple precaution of first milking the bowel between two rubber-covered intestinal clamps before incising for insertion of the tube. (Fig. 1).

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*Read before the Section on Surgery at the Sixty-Ninth Annual Session of the Mississippi State Medical Association, Greenville, May 5, 1936.

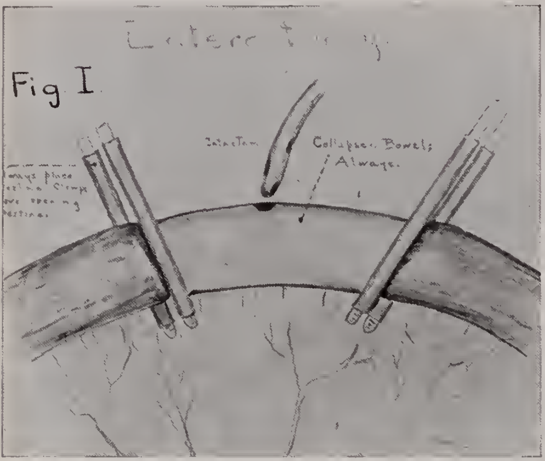


Fig I.
Collapsed Bowel; Always.

This simple measure may mean the difference between recovery and fatality. The other customary guards against soiling are to be complied with, and it is not amiss, after suturing, to mop all potentially soiled areas with sterile water, saline, or some non-corrosive antiseptic such as merthiolate, mercurochrome, metaphen or mercarbolide.

Fastening the ureter to the sigmoid-rectum may be done by a number of different methods. The aim of the best of these is not only to obtain a successful, safe and properly functioning anastomosis, but to do it as aseptically as possible, and to implant both ureters at the same time. One of the most outstanding methods for the maintenance of relative asepsis in this operation is that of Chas. Higgins, of Cleveland.[5 6 7] Attention is called to this method because of its relative simplicity. Both ureters may be implanted at once, as the current into the bladder is not obstructed by the operation. It offers less opportunity for contamination of the peritoneal cavity than older methods from which it is an outgrowth.

Worthy of note and a point easy of application is the seeking of relative asepsis in total hysterectomy. Several years ago, having a total hysterectomy to do, where the cervix was badly torn, infected and badly eroded, I packed the vault of the vagina each day for several days prior to operation, with five per cent mercurochrome gauze, changing each twenty-four hours. After the operation, the patient had a most uneventful and peaceful convalescence, her temperature not rising to 99 degrees. Since then I have similarly packed all like cases and have obtained definitely improved convalescence. Before caesarean section, the cervix and vault of vagina are treated with some antiseptic solution such as tincture of iodine, tincture of merthiolate or tincture of metaphen, the aim being to sterilize the inside of the canal as far as possible, and the presenting portions of amnion that will later be drawn back through the abdomen. Such practices as these are well worth carrying out. They are theoretically sound and prove themselves worth while through their practical application.

The handling of abscesses in and about the peritoneal cavity leads to the application of much ingenuity in the maintenance of relative asepsis in this field. Just as one removes an inflamed appendix, with precautions against soiling the field of operation, and thus maintains relative asepsis, so is it possible to drain known abscesses with similar care as to soiling, and with almost equally successful outcome. In Figures 2, 3 and 4 are shown peritoneal attachments and two cross sections of the peritoneal cavity, illustrating areas where collections of pus may take place. In general, these drainage areas should be kept in mind by the operator and drains inserted to all such areas which happen to adjoin the abscess that he evacuates. The problem of the subphrenic

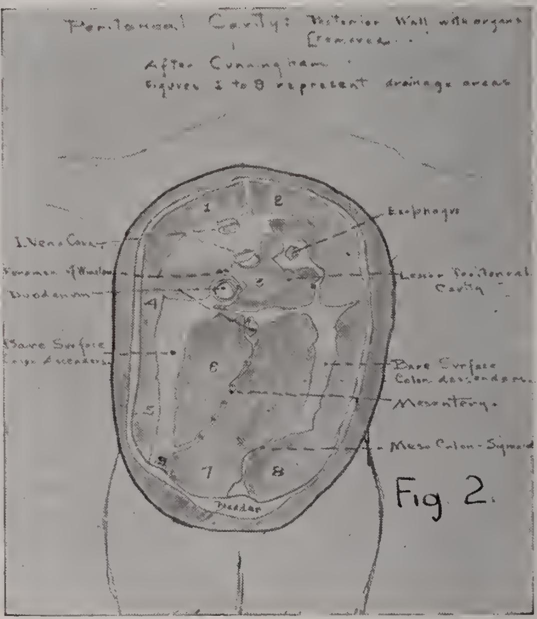


Fig 2.
Peritoneal Cavity: Posterior Wall with organs removed.
After Cunningham.
Figures 1 to 8 represent drainage areas
I. Vena Cava
Foramen of Winslow
Duodenum
Bare Surface Large Ascendens
Esophagus
Lesser Peritoneal Cavity
Bare Surface Colon descendens
Mesentery.
Meso Colon-Sigmoid
Bladder
1
2
3
4
5
6
7
8
9

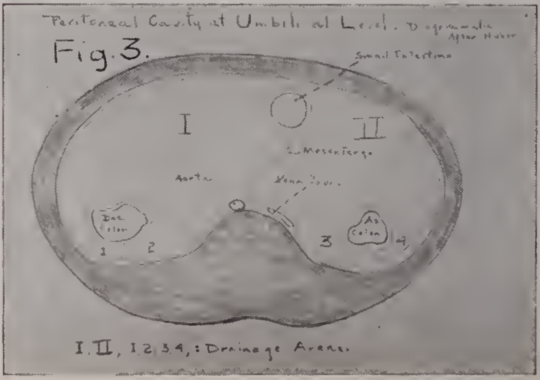


Fig. 3.
Peritoneal Cavity at Umbilical Level. Diagrammatic
After Huber
Small Intestine
I
II
Mesentery
Aorta
Vena Cava
Des. Colon
As. Colon
1
2
3
4
I. II, 1. 2. 3. 4, : Drainage Areas.

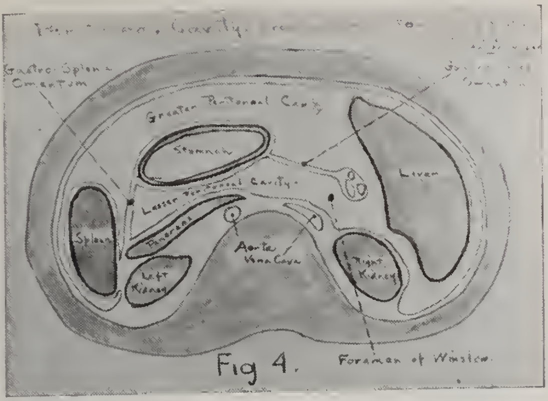

Gastro-Splenic Omentum
Greater Peritoneal Cavity
Stomach
Lesser Peritoneal Cavity
Spleen
Pancreas
Left Kidney
Aorta Vena Cava
Right Kidney
Liver
Foramen of Winslow

Fig 4.

abscess is one that can usually be solved by extraperitoneal approach. While I have seen a subphrenic abscess drained transperitoneally with recovery, the patient in this instance had a trying convalescence. Ochsner and Graves[8] in 1933 renewed interest in subphrenic and subhepatic abscess, with operation by extraperitoneal approach. In Figures 5 and 6 are diagrammed two typical extraperitoneal approaches to subphrenic abscess. Because the liver is usually pushed downward, it is usually easier to reach the collection of pus extraperitoneally than would seem at first glance. Many appendiceal abscesses can be reached extraperitoneally, particularly if the incision is made well out to the right or posteriorly. This has been done on a number of occasions with most gratifying results. In Figure 7 is diagrammed a typical approach from in front. Most pelvic abscesses may be drained by posterior colpotomy. Very few cannot. Nevertheless one occasionally encounters in a woman, a pelvic abscess which arises from a ruptured appendix, in which the appendix was located in the pelvis from the beginning. I have encountered four such cases in fairly recent years, three of my own and one in which I assisted. In these, no abscess could be felt by rectal or vaginal examination. No attempt was made in any of these four cases at extraperitoneal approach, and, in looking back, it is

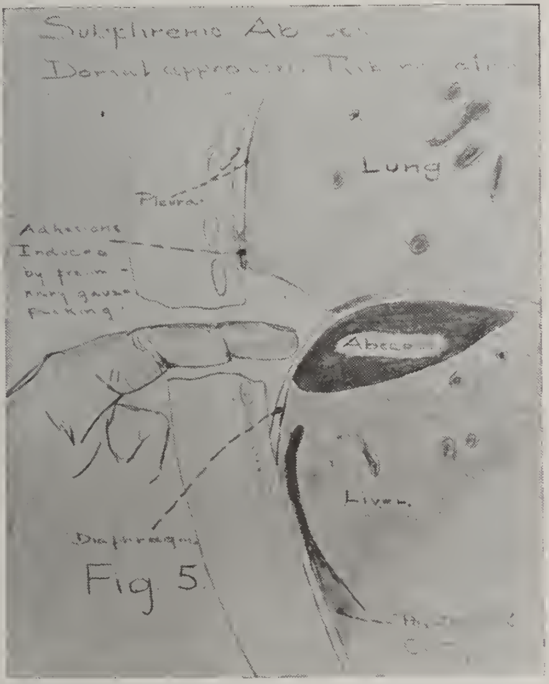

Subphrenic Ab
Dorsal approach
Lung
Pleura
Adhesions Induced by
Abscess
Liver
Diaphragm

Fig 5.

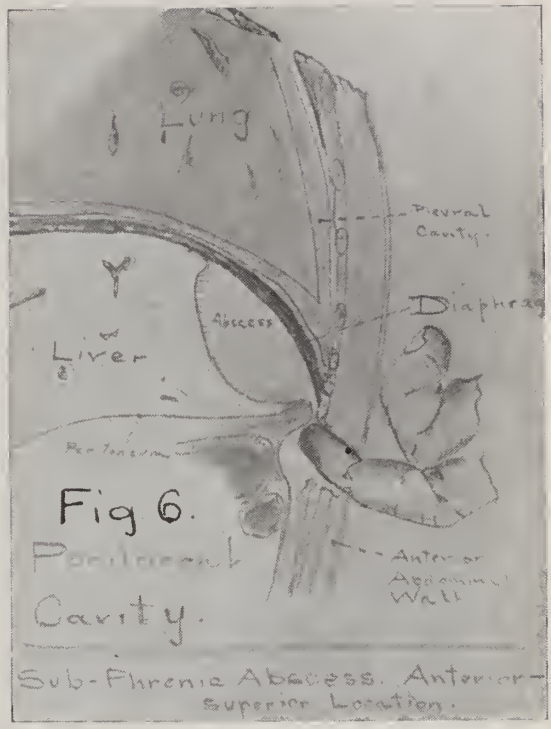
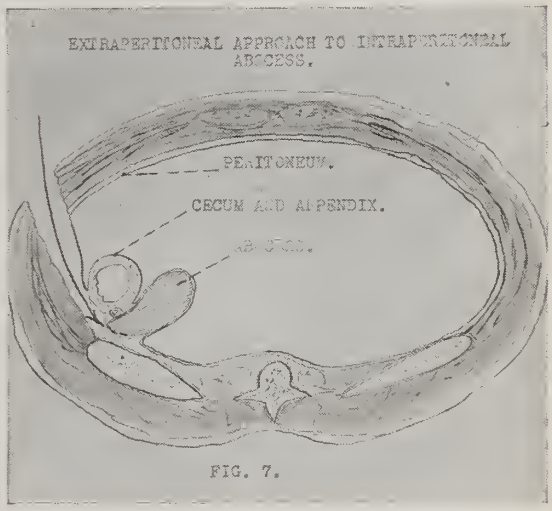

Lung
Pleural Cavity
Diaphrag
Abscess
Liver
Peritoneum
Anterior Abdominal Wall
Peritoneal Cavity.

Fig 6.

Sub-Phrenic Abscess. Anterior-superior Location.

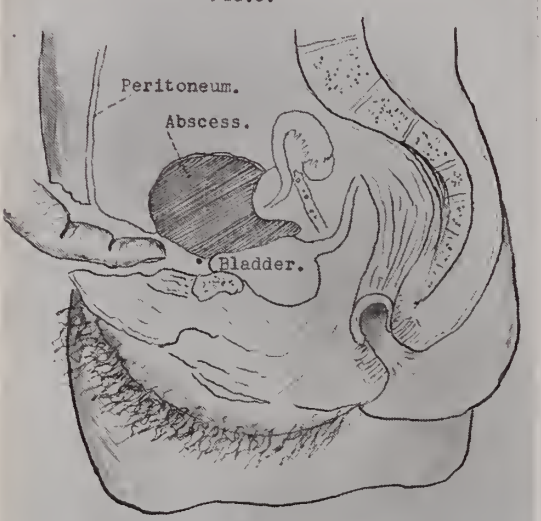

PERITONEUM.
CECUM AND APPENDIX.

EXTRAPERITONEAL APPROACH TO INTRAPERITONEAL ABSCESS.

FIG. 7.

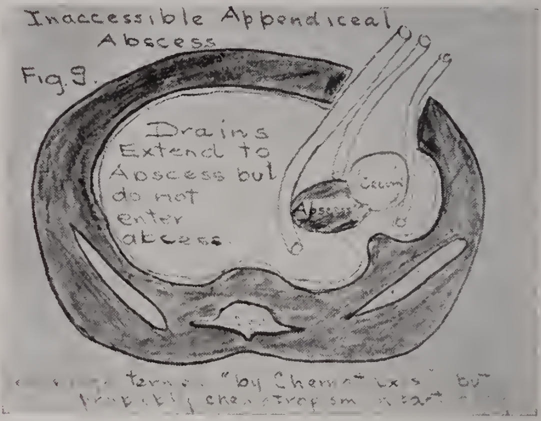
felt that two at least could have been approached extraperitoneally from in front. Similarly an abscess of tubal or ovarian origin may be approached, when too far forward for vaginal drainage. In Figure 8 such a case is diagrammed. One case falling into this category was drained by the anterior approach. She had been operated upon before and there were old adhesions which virtually made the operation simpler, as the general peritoneal cavity was already partially walled-off. The principle of anterior approach, extraperitoneally, is feasible, and the operation can be started just as one starts to do an extraperitoneal caesarean section.

FIG.8.



ANTERIOR EXTRAPERITONEAL APPROACH TO PELVIC ABSCESS.

In the case of appendiceal abscess, there is the rather frequent abscess which lies in such a location that extraperitoneal approach is impracticable. Formerly I employed the Albert Ochsner treatment, or else drained the abscess with suction and drains, occasionally and always removing the appendix where possible. For several years I have adopted a different procedure, suggested by an article of Joseph R. Eastman's,[9] in which the drainage was termed drainage by chemotaxis. The method is to open the abdomen, expose the appendiceal abscess without breaking into it, place drains into the various drainage spaces about the abscess, and down to the abscess, as shown in Figure 9. After eight to seventy-two hours, more or less, drainage develops along the lines of the inserted drainage material. The rest of the general abdominal cavity becomes walled-off and the abdomen remains in much the same condition as after simple appendectomy. This procedure gives a superior convalescence to that of the older type of operation in which the abscess cavity has actually been entered and free pus has contaminated the general peritoneal cavity. The following excerpts are quoted from Eastman's paper: "Much less frequently it has been found, after opening the abdomen and peritoneal cavity itself in the usual manner, that large appendiceal abscesses deeply situated could not be opened and drained safely in the ordinary transabdominal manner; that is, it could not be done without extensive contamination of the general peritoneum. Therefore, in such cases a very large cigaret drain with a protruding tuft of gauze was placed on the abscess, the abdominal wound being closed around the distal end of the tube. It has been the almost invariable rule that rupture of the abscess has occurred within forty-eight hours, but not, of course, until the canal established about the tube was sealed off by peritoneal adhesions. Thus, a transabdominal but to all purposes extraperitoneal avenue of drainage was constructed. It seems clear enough that adhesions and exudate about the inner end of the tube soften as the result of the dynamic effect of pressure, suction and chemotaxis focalizing the infection about the inner end of the tube." ". . . . Rather extensive observation has shown, moreover, that in cases presenting difficulty in determining whether or not abscess really existed, ample seropurulent drainage has been attended or followed by disappearance of the mass and complete recovery of the patient." Eastman also mentions the use of this principle in high pelvic abscess, placing his drain through a posterior colpotomy wound and waiting, later going in from the front to correct the causative focus. He also quotes A. J. Ochsner's paper before the American Surgical Association at Toronto in 1921, in which Dr. Ochsner described the use of this principle in successfully draining abscess of the tail of the pancreas. The term "chemotaxis" may not be exactly correct etymologically, though a certain amount of chemotaxis may actualy take place. Prob-


Inaccessible Appendiceal Abscess
Fig.9.
Drains Extend to Abscess but do not enter abscess.
Cecum
Abscess

ably dynamic pressure, (dialytic pressure) is a better explanation. That leukocytes are attracted toward certain chemotropic substances is well known. To quote McCutcheon, Wartman and Dixon,[10] "It is generally accepted that the accumulation of leukocytes in areas of inflammation is due to chemotropism (chemotaxis). These terms mean that the cell orients itself in a concentration gradient of the attracting substance and advances (supposing the reaction to be positive) toward regions of higher concentration." . . . "The mechanism of such attraction is not known." . . . "The attractive force exerted by all the substances studied—glass and paraffin as well as dried leukocytes—seems to be quite definite, though certainly weak. For comparison with strong chemotropic source, we present . . . in which the attracting body was a clump of staphylococcus albus." "Metchnikoff found that amebocytes and leukocytes . . . collect around supposedly inert foreign bodies." A few cases will not prove the point and my experience in this field has not included the large number of cases required for drawing of adequate conclusions. The following three cases have been selected to illustrate the principle of drainage by this method.

Case I. No. 16306 N. Sanat. L. H. White male, aged 16, single. Admitted March 5, 1934. History: Five days ago developed generalized pain through abdomen. Vomited. Went to school as usual. On the succeeding days he was no better. No particular treatment was taken by him. His mother is a widow and he did not wish to worry her. Medical aid sought on Monday, March 5. Past history has no bearing on the above. He has been a rather healthy youngster always. On examination, the lower half of the abdomen was tense with definite tenderness over McBurney's point. No mass palpated. Blood count: T. W. 15,000, S. M. 17%, L. M. 1%, Polys. 82%. Operation: transverse incision. Retrocecal appendix with tip buried in a walled-off abscess not accessible to extraperitoneal approach. Three rubber tissue drains placed, down to and about the appendix area. The abscess was otherwise left alone. Post-operative: almost continuous venoclysis of 5 per cent glucose in normal saline. Continuous saline proctoclysis for three days; with breaks for non-absorption. Drainage serosanguinous at first, gradually becoming purulent, of sour-paste staphylococcal type. Patient passed gas and dark fecal fluid from bowel after 72 hours, and food was given. No general peritonitis developed. Maximum temperature 101.8 degrees F. on first post-operative day; normal on fourth day. Two months later he had a violent cramp and nausea, while at school. Vomitus profuse. Blood count, T. W. 12,700., S. M. 18%, L. M. 2%, Polys. 80%. Abdomen reopened. Some old pus and some adhesions found around a partially destroyed appendix. Appendix removed. Recovery uneventful.

Case II. No. 17,435, N. Sanat. M. T. Col. male, married, aged 48. Admitted Sept. 10, 1935. Appendicitis of 72 hours' duration. In this case a definite mass was felt in the right lower quadrant of the abdomen, but was not deemed operable by extraperitoneal approach. At operation a walled-off abscess was found, down to and about which drains were placed. Drainage at first was serosanguinous. This changed to purulent type on the third day, but without odor. Two days later, drainage was both purulent and foul. No spreading peritonitis took place. Patient took liquid nourishment by mouth in 48 hours after operation, soft diet twelve hours later. On the twelfth day he went home. Drainage continued for about a month, to slight degree, with patient walking about and getting stronger. No further attack to date. Removal of the appendix advised and not accepted. Maximum temperature 101 degrees F. on first post-operative day, normal on third day.

Case III. No. 17,597, N. Sanat. 11-15-1935. L. M. White female, aged 9, school girl. Six days ago following a cold, nausea developed. Vomiting and pain in abdomen later developed. Diagnosis of appendicitis by family physician. Examination showed partially distended abdomen in a frail child, with some tympany. No palpable mass. Patient toxic in appearance. Heart rapid. Lungs: scattered fine mucous rales over both lungs posteriorly and high-pitched breath sounds over right hilus. Blood count: T. W. 17,500, S. M. 13%, L. M. 1%, Polys. 86%. Abdomen opened through oblique incision. Free fluid with no odor encountered. Walled-off abscess found with appendix not visible. Extraperitoneal drainage not considered feasible Drains inserted down to and about abscess and abdomen closed. Lung condition treated with infra-red applications. Patient supported by intravenous glucose and saline. Took surgical liquids by mouth three days after operation. At this time the abdomen was flatter and the drainage was good but without odor. Odor developed on the sixth post-operative day and drainage was profuse. Nine days later drainage was almost nil. Patient sent home. No attack since. Appendectomy advised but not accepted as yet. Maximum temperature 102.8 degrees F. on first post-operative day; normal on fifth post-operative day.

Comment: if the patient survives the first attack, and operation, the second operation is usually uneventful, even though free pus is encountered at the second operation. The pus at second operation is evidently sterile. Also the peritoneum has built up resistance against this particular infection. This is a fact that is true in about one hundred per cent of the cases. This building up of resistance by the peritoneum between first and second operation is also noticed in colonic surgery. Claude F. Dixon[11] states, "Older contemporary surgeons have observed repeatedly that peritonitis develops with comparative rarity following secondary abdominal operations, provided the primary procedure has been carried out only 2 to 3 weeks previously." In the three cases briefed above, the surgeon is not obliged to do the secondary operation within a 2 to 3 weeks' period. Cases under observation have had the secondary operation of appendectomy within a period of several months, and to date no fatality from the secondary operation has resulted, nor even a disabling peritonitis.

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DISCUSSION

Dr. V. B. Philpot (Houston): I have enjoyed Dr. Benoist's paper very much. It shows the author's familiarity with the subject and that he has done considerable research relative to asepsis in abdominal surgery.

We find in studying the literature on surgical asepsis, so far as the abdomen is concerned that there are many methods, any and all of them having worthwhile features, but because of this it may seem somewhat confusing to ascertain the right procedure. And so I shall limit my remarks to a very few features in the prevention and treatment of sepsis in abdominal surgery: first, I emphasize the necessity of simplicity in any surgical procedure of the abdomen—what I mean is the importance of traumatizing the tissue as little as possible in doing the necessary operation; second, the complete debridement of all necrotic or jagged tissue present and complete hemostasis before completing the operation; third, where pus is present or it should become necessary to rupture an abscess, the importance of preventing the spread of infected material by proper packs, suction and otherwise, and liberating only the smallest number of adhesions incident to doing the necessary operation; fourth, if possible secure drainage by gravity. In other words, insert tube or tubes in the lowest portion of the incision or through a stab incision that will give such drainage or by the position of the patient. In pelvic abscess I find a good sized tube inserted through the posterior vaginal wall is always preferable to one through the abdominal wall, and the convalescence is far more satisfactory when this is done. Fifth, in abdominal infections the preventive treatment of the abdominal incision itself as advocated by Dr. H. A. Gamble of this city and his co-workers is of paramount importance. It has been demonstrated by Babcock, of Philadelphia, and some English surgeons that pus itself in the abdomen is not so serious as we might think. In fact, Babcock contends that pus contains many antibodies helpful in destroying bacterial toxins. It has been demonstrated by Gamble that the Welch bacillus is the causative factor in many abdominal incision infections. He has, therefore, for a number of years practiced the procedure of closing the peritoneum loosely around the drain and leaving the rest of the abdominal incision open, allowing the best therapeutic measure, namely, air, to prevent and treat these infections. He finds from a large clinical experience that it is seldom indeed that an intra-abdominal infection kills the patient but that it is the infecion of the abdominal incision itself that produces death. We have followed his procedure in this regard in the main ever since his first paper on this subject was read a number of years ago, and we are convinced that it is the greatest advance in the treatment of abdominal infections that we have had during the last quarter of a century. Our patients convalesce much easier, have far less temperature, the mortality rate has been lowered a hundred per cent, and in Gamble's own experience the death rate is practically eliminated. I hope, Mr. Chairman, that this feature in the treatment of abdominal infections will become more generally used, especially in Mississippi, and that in the general discussion you will call on Dr. Gamble himself to give us more in detail concerning this procedure.

Dr. Benoist (closing): I wish to thank Dr. Philpot for discussing this paper. I agree most heartily with what he has to state. I am glad that he has emphasized the importance of the Gambles' method of prevention of post-operative gas-gangrene of the abdominal wall. While I did not mention it in my paper as such, I am not unmindful of the fact that it is one of the most far-reaching principles of operative surgery that has been taught the profession in recent years.

Modern Ophthalmology*

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It is apparently the custom for one who has lived to ripe old age, or for one who has practiced his profession for twenty-five years or more, to become reminiscent. This may be the garrulity of age, or a sincere endeavor to arrange and classify knowledge acquired in the course of time. It has occurred to me that a brief consideration of the changes and advances in the practice of ophthalmology which I have observed might be interesting to, at least, the younger members of the section. Necessarily only a few of the diseases and their treatment can be considered in this discussion, and those that have changed most and least will be chosen.

Many methods of treatment are not subject to improvement for various reasons; they may be satisfactory as they stand or the condition for which they are used may be of such a nature that perfection is not attainable. It is an axiom that when two or more methods of treatment are advocated for a single disease or condition, that none is entirely satisfactory. Frequently a certain method is useful in the hands of one man and another method more practical for another. Each should choose that method which is best for him.

Little, if any, change has taken place in methods of refraction in my time in the profession, in spite of the fact that we spend more time and effort in its practice than in any other one activity connected with our profession. The eye is at best an imperfect optical instrument, and there is no absolutely exact method of measuring its refraction. In addition there are many factors entering into refraction of diseased eyes not encountered in those that are healthy. A few of these are corneal irregularities and scars, lens opacities and opacities of the vitreous, not to mention the imperfect mental development of some of the patients we deal with, which has been called mental astigmatism. Some of my friends wonder how I can refract without the use of cross cylinders; others think I am hopeless as a refractionist because I seldom use an astigmatic chart; and still others think the ophthalmometer is indispensible. On the other hand--I wonder how they get along without the help of cycloplegia and a retinoscope, and how they can be certain of their prescriptions without making careful manifest examinations before the use of cycloplegics. All of which is another way of saying that all methods of refraction are inexact, for if there were one exact method, whether simple or complicated, all of us would use that method and no other. It is certain, however, that one cannot be a good refractionist without an understanding of the anatomy and physiology of the eye, and of optics, physical and physiological. This should include some knowledge of the fitting of spectacles and the effect of ill fitting glasses on the patient's muscle balance and therefore on his comfort. Much progress has been made in the last few years in the manufacture of comfortable and attractive mountings and in the grinding of better lenses. My first cataract patients had a choice between biconvex lenses and plane convex lenses, and bifocal glasses in these cases were never satisfactory. Now the corrected cataract lenses with reading segments are in the reach of practically all our patients, and increases their visual acuity, fields of vision and comfort.

Mention should be made of the work being done at Dartmouth on aniseikonia. This work on inequality of visual images and its correction is as yet far from finished and its value not determined. Its proponents are enthusiastic and claim that sufferers get much relief from their special correcting lenses. On the other hand, certain critics of the work of these experimenters insist that aniseikonia is not a cause of discomfort and the relief given, if any, is due to the relief of heterophoria or some other more familiar cause of eyestrain. The facts are that the investigators suffer from the natural excess enthusiasm of research workers, and their critics lack as yet sufficient information to justify their criticism.

Another new thing in the correction of refractive errors which certainly is of value, is the use of contact glasses. Much is yet to be learned about them and the idea that they will take the place of ordinary glasses in the near future is undoubtedly the offspring of loose thinking, and those men who have employed them most, certainly hold no such view. There is still more discussion as to the relative merits of the ground and the blown types of contact glasses, and neither is yet so satisfactory that they can be worn continously without discomfort, and local anesthesia is usually necessary for their introduction into the eye. In cases of conical cornea their value is beyond question. The employment of contact glasses will certainly not be common until the cost is materially reduced, for at present they sell for about sixty dollars a pair, which is quite out of the question for the average patient. The fitting set which contains ten lenses costs us two hundred dollars.

Diagnostic equipment and apparatus for certain types of treatment have been improved and added to beyond belief. Within the past few years fundus photography has been perfected for purposes of records and leisurely study.

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*Read before the Section on Eye, Ear, Nose and Throat of the Sixty-Ninth Annual Session of the Mississippi State Medical Association, Greenville, May 6, 1936.

In ninteen hundred eleven (1911) the only electrical opthalmoscope I had ever seen was one Dr. Marple used himself, and I believe he devised the first satisfactory instrument of the kind. While it may be possible to see everything with the reflector type that we are able to see with the electric opthalmoscope, ophthalmoscopy has been made much less difficult and time consuming. I sometimes think that a poor instrument will show us more than we can interpret.

The corneal microscope has added something to our knowledge of the anterior segment of the eye. I am aware that it is used less now, perhaps, than when it was a novelty, but our knowledge of the lens and of certain inflammatory diseases, such as heterochrome irides, has been broadened since it has been available. It is probable, however, that few patients owe a cure of disease or even a shortening of its course to our possession of this diagnostic instrument.

Recently the metronoscope, together with its companion instrument, the ophthalmograph, for the detection and correction of reading difficulties has been perfected. The makers claim much for the instruments which have not yet been demonstrated to the entire satisfaction of some of us.

It should not be forgotten that equipment cannot replace knowledge and judgment in the diagnosis and treatment of disease. Gadgets without number have been presented to us; developed and sold to us for no other purpose apparently, than to occupy space and accumulate dust. Once in a period of leisure I went catalog-shopping and found that I could spend thirty-five hundred dollars for additional equipment, and twelve hundred dollars a year to house it, without adding one thing to the comfort of my patients nor shortening by a day their period of disability.

Perhaps the greatest advance in non-surgical ophthalmology is in our more satisfactory methods of treatment of strabismus. This work, in its more modern aspects, was started in England but has been adopted generally in this country. An oculist busy enough to have much use for orthoptic apparatus is too busy to use it personally, so he must have a trained assistant to do this type of work. In Memphis we have found it quite satisfactory to send our patients to a central orthoptic clinic in charge of a trained technician, and they report back to us at proper intervals for a checkup of results. This arrangement relieves us individually of a large investment of money in equipment and personnel. The result in many cases of strabismus and amblyopia exanopsia has been extremely gratifying. It must be remembered that patience, time and knowledge are necessary in addition to much equipment in the successful treatment of these cases. I have yet, however, to find binocular single vision after surgical correction of squint. I know that many such reports are in the literature, but I have not personally had opportunity to test them.

Many new drugs have been presented to us in recent years most of which are useless. Some exceptions to this have been local anesthetics, insulin and foreign proteins. There is some doubt in my mind, at least, as to how foreign proteins act, but there is no doubt as to their benefits. Certainly many eyes are now saved by them that would have been lost when I first entered the field of ophthalmology. In my personal experience only those drugs which cause febrile reaction have been useful, and these have been very useful in cases of iritis, hypopyon keratitis, and the purulent ophthalmias.

Those of you who have tried to keep diabetics comfortable with glasses with a constantly varying blood sugar can appreciate the advantages we have all received from the intelligent use of insulin.

More modern treatment of syphilis has been of enormous help in clearing up certain ocular manifestations of the disease. Certain of these treatments, however, should be used only under the observation of an ophthalmologist in cases showing fundus disease. I have seen three cases of disastrous loss of visual fields from the use of tryparsemide. It is my practice to advise against the use of this drug in all cases of fundus disease attributable to syphilis, and to insist upon a check of visual acuity, fundus and visual fields before each of the first four doses in other cases.

Tuberculin therapy in diseases of the eye has become quite common in ophthalmology and practically abandoned in all other branches of medicine. Perhaps this is because the lesions we encounter are small and respond better to such treatment than the massive lesions found elsewhere. Whether the benefit derived is due to the specific action of tuberculin or to its para-specific action as foreign protein, certainly this method of treatment is useful. Since the action of tuberculin appears to be cumulative, care must be taken in case of fundus lesions to makes doses small enough and far enough apart to prevent destructive focal reactions.

More knowledge of vitamins and of allergic diseases has certainly enabled us to relieve many patients whose visual apparatus formerly functioned under difficulties. My own efforts, however, toward the alleviation of allergic manifestations and of deficiency diseases are not yet invariably crowned with success. Close co-operation between the ophthalmologist and internist or allergist is necessary in all such cases.

Twenty-five years ago we were only beginning to suspect that focal infections might have somethinng to do with certain ocular inflammations. Perhaps we are now riding that hobby too hard, as is the case of vitamins and allergic phenomena, but the knowledge of such foci has shortened the course of iritis and prevented much destruction of the choroid.

I once heard an oculist with a good practice say that he had no fear of sympathetic ophthalmia because he had never seen a case. What a blissful state is his! I am sure my life has been shortened by the number I have encountered, and even now I am censuring myself for not having enucleated an exciting eye soon enough. And, unfortunately, a text book fifty years old will be as helpful in its treatment as the latest book from the press. I am not forgetting the injection of the patient's own blood and serum. I have used this in several cases and am not sure that it has been of any help. One of my little patients is a student in the Tennessee School for the Blind because I was not aware in 1928 that sympathetic ophthalmia might result from a non-perforating wound. I saw this patient within thirty minutes of the time his left eye was struck by a small stone and found the hyphemia which has been almost invariably present in those cases since reported, in which sympathetic inflammation occurred following non-perforating wounds.

At the risk of being thought old fashioned or reactionary, I might say the same thing of trachoma. However, the surgical correction of the sequelae of trachoma has been improved immeasurably within the past few years. The chief addition to the surgical treatment of these sequelae is the operation of Webster which is simple, easier to perform than its predecessors, and quite effective.

It is a matter of common knowledge that chronic catarrhal conjunctivitis is more prevalent than formerly, though the reason for this is obscure. It has occurred to me that the atmosphere in modern cities may be responsible for the increase. This new atmosphere is destroying much of the vegetation that previously flourished in our cities, and it does not seem unreasonable that it might set up a chronic irritation in so delicate a membrane as the conjunctiva. The symptoms of the type of inflammation I refer to are smarting and burning which is aggravated by use of the eyes, associated with little, if any, discharge. The treatment is unsatisfactory but the symptoms may be controlled by the topical application of a mild solution of silver nitrate and the frequent use of one of the common zinc solutions. Most of these cases that I see have already acquired glasses from an optometrist for some real or alleged error of refraction. Since the symptoms are brought on or aggravated by the use of the eyes, the patient naturally concludes that he is suffering from eyestrain.

Perhaps more progress has been made in surgical technique than in any other branch of ophthalmology. The conjunctival flap operation for perforating wounds first came to my attention nineteen years ago, and without definite figures at hand, I say unhesitatingly that in my hands it has saved many eyes that would have formerly gone to enucleation, and that in other cases useful vision has been conserved by the operation.

In glaucoma many new surgical procedures have been brought out, and thousands of pages have been written about the disease, but practically nothing has been added to the knowledge of the condition and the patient is little, if any, more certain of cure now than he was twenty years ago. We knew then, as we know now, that myotics would not cure the disease yet. We still treat patients with them and sometimes for long periods of time. Surgically we still do the iridectomy, the cyclodialysis, the trephine and the iris inclusion operations. None of these procedures is satisfactory, but they will have to serve until something better is offered. These operations are mentioned in the order of their introduction, so it is evident that some time has elapsed since the last method, iris inclusion, was presented to us.

It is encouraging, I believe, that we do not temporize with glaucoma as we once did, though I sometimes think that the percentage of cures in glaucoma would be greater if we had nothing at all to offer in the way of medical treatment. In other words, we know little more to do for glaucoma than we knew twenty or twenty-five years ago, but we have more courage in adopting surgical measures earlier in the disease. Both the medical and surgical treatments of glaucoma are entirely empirical, and are mechanical in their effects. It is to be hoped that one day we will understand primary glaucoma so that it may be attacked at its source. The only glaucoma patient who can be benefited by our efforts is that one who is diagnosed and treated before the destructive effects of the disease have become irreparable. An optic nerve dead from pressure cannot be brought to life by any measure known now or to be learned in the future.

In spite of some baseless claims to the contrary, there is nothing to offer cataract patients except surgery, and our results leave not much to be desired. The technique of cataract extraction has certainly been improved and I believe that the percentage of cures has been increased and that the average visual acuity is greater now than it was twenty-five years ago. Perhaps the greatest factor in the increased safety of the operation for cataract is akinesis. The method of O'Brien of injecting the temporal branch of the facial nerve where it passes over the neck of the condyle of the jaw is my personal choice of akinesis. Another safety measure is the bridle suture in the tendon of the superior rectus. The average of visual acuity is probably raised and convalescence is certainly shortened by intracapsular extraction of cataracts. The method of Colonel Smith did not appeal generally in the Western World and that of Barraquer requires too much complicated apparatus. The same result can be obtained simply and easily with certain forceps if the technique is observed. I believe the hazard of vitreous loss or other complications is no greater in intracapsular extraction than in the older methods, if, I repeat it, the proper technique is observed. Simple extraction, and extraction with a small peripheral iridectomy as practiced by some of us is not particularly new and probably have no advantage other than cosmetic. It is possible, however, that allowing the iris to remain in place does, especially in intracapsular operations, help to prevent vitreous loss.

Since the only reason for wearing an artificial eye is to improve the appearance, we are remiss in our obligation to the patient if we do not achieve the best cosmetic result possible after removal of the eye. Where it is not contra-indicated, perhaps the best result is obtained by evisceration. The reaction with its annoying edema is much reduced, if not entirely prevented, by using suction instead of the curette in this operation. It is essential to remove ALL the uveal tissue. When enucleation is practiced some sort of implantation should be used. My personal preference is the lead-free glass ball, which is inexpensive, and quite satisfactory.

The Dupuis-de Temps operation for chronic dacryocystitis has its proponents and its critics. Perhaps a just evaluation of the procedure is that it is a difficult, tedious operation which is successful in a slightly higher percentage of cases than the dacryocystorrhinostomy of Toti, and little, if any, more satisfactory.

Corneal transplantation with successful restoration of useful vision is an accomplished fact, but few ophthalmic surgeons are as yet justified in attempting the operation. In this direction, however, lies hope for sight in a large percentage of our blind and its prospect is probably not very remote.

It is my opinion that the greatest recent advance in surgical ophthalmology is in the field of retinal separation. In my early days in practice we had many treatments for this condition and all were equally ineffective. The work begun by Gonin and improved upon by Walker and others has given new reason for hope to these unfortunates. The results have not been so satisfactory as we at first hoped, but any improvement is infinitely better than the helpless, hopeless blindness to which these victims were formerly condemned. Muscle imbalance is a minor factor to be considered when there is some function present in both eyes. The earlier these cases are operated upon the more chance there is of restoration of vision, and those who delay more than three or four weeks have little chance for recovery of useful vision.

It appears, then, that we have reason for both disappointment and encouragement in considering briefly the last several years of ophthalmology. Correction of refractive errors leaves much to be desired, but it goes without saying that if we ophthalmologists were invariably and without exception accurate in our prescriptions we would have no competition in this field. The treatment of glaucoma is distinctly discouraging and little hope is in prospect for its improvement. There is much ground for satisfaction in the medical and surgical treatment of several of our important diseases and defects. Equipment and gadgets innumerable are available for diagnosis and treatment, and they should be selected with discriminating care, remembering that such material is useless in the absence of knowledge and sound judgment.

DISCUSSION

DR. Wm. B. CLARK (New Orleans) The essayist's paper is remarkably interesting, and particularly valuable to us younger members. Certainly the honest and practical instruction with its discipline to young men in the centers of medicine and especially Memphis has done great things to help make modern ophthalmology what it is. This idea the essayist has modestly soft pedaled but certainly should be stressed.

It is gratifying to get the essayist's point of view as regards much of modern equipment. It is not comforting to think that we might be neglecting our patients or that we are not in some creditable measure keeping up to the standards, because as young men we are not able financially to buy such expensive materials. In this respect the article by Dr. Samuels of New York on "The Royal London Ophthalmic Hospital and the King George V Extension," makes us truly think we are far behind here in Mississippi. Our one hospital for the blind is inadequate and at the present not under the supervision of an ophthalmologist. This is also true of the deaf school. The only other activity in this work is a separate commission, inadequately financed by the state legislature. This commission I have had the good fortune of serving, but without any clinical facilities other than my own humble office, and our general hospitals. Just the other day I had at our state charity hospital, a colored woman with marked proptosis of the right eye but because the hospital has so little funds the x-ray films had run out, consequently no rays were made. I did an external radical frontal operation and found a most extensive and interesting frontal mucocele which probably will have to go unreported because of the lack of clinical evidence. This sort of thing is happening continuously. The patient was not neglected but modern ophthalmology was not upheld. In the future I have great hopes that from some of our commissions or charities there may be developed clinical facilities which may be of greater service to the blind of our state and a great training school for the ophthalmologists of our state.

During the past session of the College of Physicians in Detroit, Dr. White, the cardiologist at Harvard, presented a clinic which is in line with the ideas of the essayist. At this clinic he presented ten cases, each with different types of heart lesions, and diagnosed and recommended therapy without the aid of any diagnostic outfits, electrocardiograph, etc. This was acclaimed one of the most remarkable demonstrations of the actual knowledge of heart diseases. This thing struck me so forcibly that I thought it worth mentioning.

The further one goes in medicine, whether ancient or modern, the more one is impressed with the fundamental need of honesty in all examinations and recommendations, and most assuredly this is true in doing refractions and prescribing glasses, and in this respect, I want to go on record now as being bitterly opposed to the refund idea with the optical companies. I am happy to hear that the essayist does not need many of the accessories to do careful and correct refractions. I find that the manifest and past examinations with cycloplegia and retinoscopy adequate, at least, I conscientiously think so, this, of course, combined with the other procedures in routine examination.

We are still unable to correlate the clinical signs and symptoms with existing pathology in connection with many allergic manifestations, and as much so, as in 1929 at which time a boy of nine came to the Cleveland Clinic with marked blindness and edema of the disc of one eye, and nasal allergy. During the course of a few days the edema and vision entirely cleared with the shrinking of the nose and with the onset of a new remission of his nasal allergy. However, many disturbances undoubtedly can be attributable directly to ocular allergy. Only the last few days I have seen two cases of marked ciliary injection which was immediately relieved by adrenalin and which remained clear as long as the patient stayed away from flowers.

Cataract intracapsular extraction as so beautifully done and taught to me by the men in Memphis has served us well. In a recent series of intracapsular extractions without iridectomy and with eserin and later atropine, our results have been good, at least so far.

There are many more extremely interesting factors in this paper but it will suffice to say that it is comforting to us younger members that we have such men as the essayist and his associates so close by that we may call on whenever in trouble.

DR. VAN DYKE HAGAMAN (Jackson): I consider it a privilege and an honor to have been asked to discuss this splendid paper that your guest of honor has just presented to you. He has given you a panorama of ophthalmological advance for the past quarter century. He has passed over in a few words, subjects on which others have written books. This we understand, for his paper was not intended to provoke discussion of details of treatment and management of the many ocular diseases that he has mentioned; so, in the same manner I will pass without comment those statements that challenge my methods and beliefs about these controversial subjects and attempt to add those things, in my humble opinion, that should be included in this regime of ophthalmological progress.

First, I will mention the use of telescopic lenses in the treatment of functional amblyopia in children, which enables many, underprivileged because of their visual defects, to get an education and learn a vocation that enables them pass from that class that is dependent on society to that of the self-sustaining individual.

Next, I call your attention to the establishment of sight-saving classes in the public schools of many communities that enable the child with defective vision, either congenital or acquired, to continue in school without jeopardizing the small amount of vision that he may have by attempting to compete with his fellow pupil with normal eyes. These classes are usually taught by specially trained teachers who have a sympathetic understanding of the child's eye defect ,and they not only help him to improve his station in life by securing an education, they teach him the proper use and care of his already defective eyes.

Next I mention the realization that defective lights play an important part in the production of many symptoms and sequelae of eyestrain. The work along this line was begun by research workers and then taken up and given much publicity by the electric power industries in our country, partly because of their desire to be of service to mankind and partly because they have something to sell. But unquestionably it has some virtue, for I have seen many patients relieved of the symptoms of eyestrain by improving the amount and quality of light used for their visual tasks, after all other methods of treatment had been tried without more than temporary improvement. The part that light plays in visual tasks is not hard to understand if we stop to consider it carefully; all seeing is accomplished by contrasting the amount of light that is reflected and absorbed by the various objects that we look at, for without light we see nothing. So when we cut down the amount of light on the printed page or on the work bench, we cut down the amount of contrast and increase the visual effort in trying to see. The difference may not seem so marked at first thought of it, but when we compare the five hundred to one thousand foot candles of light in a good daylight to that of one to five foot candles as is given off by the lighting fixtures in our homes and offices, it is not hard to see that the average visual task inside is greatly increased over that in good daylight. And this is no doubt one of the main reasons that we so often hear a patient make this remark; "why every one in my office has to wear glasses!"

And last but certainly not least in importance, I must mention improvement and progress made in the teaching of ophthalmology. Twenty-five years ago and less, all that was required to be an ophthalmologist was the desire and the money to go to one of our own or European medical centers and take from a two weeks' to a six months' course in eye, ear, nose, and throat and then return a full fledged specialist. That was justifiable at the time for there were many communities inadequately supplied or without physicians trained in our specialty. And out of these "course men" were developed many of the leaders of the past and present generation. But in this day of keen competition and over supply of physicians in every line, no such hasty or superficial training is necessary or justified. In place of special courses in most places are now offered special residencies. in both special and general hospitals, that run from one to three years. For a physician to receive an appointment to one of these residencies he must present a certificate of graduation from a recognized medical school, a certificate of having served a general internship of one year or its equivalent in private practice, and a statement of his good moral character and standing in his community. These men are not taught diagnosis and treatment alone, but are given intensive courses in anatomy, physiology, physiological optics, histopathology and surgery. And when one has completed his residency he should certainly have the foundation on which to build a fuller knowledge and understanding of the various eye disorders and their relationship to human welfare. So without fear of contradiction, I say that the improvement in the requirements to become an ophthalmologist during the past two decades, is in no small part responsible for the many improvements and advances that your guest has just enumerated to you.

I can not close without mentioning the American Board of Ophthalmology and the great part that it has played in bringing about these improvements. This board consists of many of the leading teachers and practitioners in our specialty thruout this country, they give examinations to all those who have been practicing our specialty one year or longer and who can show proof of proper training in the specialty, along with statements of good moral character and ethical standing in their community. A certificate from this board is now required before acceptance as a member in the ophthalmic branch of the American Academy of Ophthalmology and Oto-Laryngology, and by many hospitals before appointments are made to their staffs, and by many medical schools before appointment to their faculties, both in the undergraduate and graduate departments. And I have been told recently that some of the larger casualty insurance companies are requiring that a man be certified by this board before he can be assigned to treat or act as a consultant to their assured.

DR. EDLEY H. JONES (Vicksburg): Until I read Dr. Stanford's paper I was not aware that he had such a philosophic nature. It is a sane paper—a splendid paper. It does us good at times to sit down, put our feet to the fire and measure ourselves with a yard stick to see what has been accomplished, what has not, and what can be done.

Knowing Dr. Stanford as I do, I know he meant this paper as a challenge to us to improve our work. Now of course, this group of men is a clinical group. We are interested in the practical application of the principles and methods that are discovered and developed by research workers. We, ourselves, cannot indulge too deeply in research but by following the research workers, we can be of assistance.

There are many subjects in this paper that are quite interesting to me. One of the most interesting is that of refraction. As he aptly put it, we spend most of our time in the refracting room, and yet I have met very few ophthalmologists who do not consider this the bane of their existence, even those whose greatest income is from that department.

I have seen many men who use cycloplegics and are content to stop with that. As he stated, either a very careful manifest must be done before or after cycloplegia, or we are going to let our patients go out with unsatisfactory glasses, which will inevitably drive them to another oculist or to an optometrist. The optometrists do not give cycloplegics, and it must be admitted that many of them do very good work. The very point here is that it is the careful refraction that counts.

One other matter he mentioned is the careful fitting of frames. It is just astonishing to note the large number of frames that are improperly fitted. Your physics will tell you that with a one diopter lens each centimeter of displacement will give the patient one prism degree of lateral imbalance. The majority of patients can carry this amount of imbalance without any trouble but occasionally it will cause symptoms.

Again, I had a patient come to me for refraction who said the glasses he had were "not any account at all." It is my custom after refracting a patient to check up his previous correction. I do that for my own information and I learn something from it. The glasses this patient was wearing were within a quarter diopter of the strength I found necessary, so I had him put them back on and found his bifocal segment set too low on his face. He could not read without lifting his glasses up. We have only two optical dispensaries in Mississippi that adjust glasses for the patients. We have to do this ourselves, and while it is easily done, it is so important it cannot be overlooked.

He made a passing mention of muscular balance and imbalance. I personally do not know of any subject in ocular therapeutics that needs more development. Books written 30 years ago tell just about all we know now.

His warning regarding too many instruments and too many new drugs is, I think, well taken. You can litter up your office not only with instruments but with drugs that may be of some use and may be of very little. I think the tendency among the conservative men is to use only proven aids.

He mentioned anesthetics, and there is one I would like to mention—evipal. It gives a nice anesthesia for 20 minutes and is easily administered. When enucleating a very painful eye or performing some ordinarily painful procedure that takes just a few moments, it is the most satisfactory anesthetic I have ever used.

He got right down to the ground on this syphilis matter. I would say that all these arsenicals are dangerous, and in my practice I never expect to use any until the fundus symptoms have cleared up. Some years ago a railroad worker of about 33 years of age came in with a history of having had attacks of dimmed vision. He had one two or three weeks before that had disappeared. His complaint was he was unable to see clearly. His vision was only 20/50 in the right eye and 20/100 in the left, not improved by correction. Ophthalmoscopic examination revealed blurring of the disc margins. He was referred for general physical examination. He had one apically abscessed tooth and his Wassermann was four plus positive; examination otherwise negative. There was no trouble in making a diagnosis of optic neuritis, bilateral. Of course, his physician advised neosalvarsan and the dentist requested one dose be given before the tooth was extracted. Now I made a very careful study of this patient, including taking his visual fields. He was given only 3 decigrams of neosalvarsan the first dose. The tooth was extracted the second day afterwards. Before the second dose I had him come in for a second check-up. His vision had improved and he was given 4.5 decigrams. Again I had him come back for the third time, and again we found improved vision, 20/30 and 20/70. His visual field was almost back to normal. He was given four doses of 6 decigrams at weekly intervals, but the day after the sixth dose he came back in my office and could not count fingers at two feet. Today he has a complete case of bilateral optic atrophy.

Allergy came in for a little mention. Having fought that battle for some 7 or 8 years in this group, I am glad to see more attention being paid to it.

He also mentioned chronic conjunctivitis. I am wondering if these cases are not allergic; they are certainly sensitive to dust and glare. There is certainly room there for investigation.

Then there is the question of light. You must remember that lights can be too bright as well as too dim. This is something else that has been developed with electricity. If these rays of light are reflected into the patient's eyes they may cause symptoms that are not relieved by proper correction. The matter was first brought to my attention some 10 years ago. A man came in with headaches from eyestrain. He was fitted with glasses but continued to have headaches. I checked him over and found his glasses correct. I finally had to go down to his office to find what was the trouble. He was a bookkeeper; he worked on a slanting desk with a glass top, a 100-watt light above and in front of him burning all the time, reflecting light right into his eyes. Of course, the headaches were caused by the reflected rays of light. We removed the glass top and changed the light to a better position, with immediate relief of symptoms. The better magazines use enamel paper almost exclusively. This paper reflects light fairly efficiently. I think it proper to advise patients how to arrange their work, lights, etc., so they will not have any trouble.

I have enjoyed Dr. Stanford's paper very much.

DR. STANFORD (closing): Mr. Chairman, Ladies and Gentlemen: I am grateful to these gentlemen for adding to the material that I had. I had hoped that some of the rest would add more to it. Dr. Clark spoke of telescopic lenses. I suppose all of us have been annoyed since this chap in New York came out with his publicity about telescopic lenses, and raised false hopes in the minds of thousands of people all over America. They have come to all of us for examination. Most of them have excavated discs from glaucoma, and can not be helped by anything, and a good many of them have not fifty cents to their name, and telescopic lenses if they would help them would cost somewhere in the neighborhood of $75.00 or $80.00. They are useful in certain cases but not in many.

I am glad also that Dr. Clark mentioned sight saving classes, and he may have mentioned the help we are getting from the Junior League and others. Dr. Ellett and I have both worked diligently with the school board in Memphis, trying to get sight saving classes. We have been keeping a list of those children who should be in sight saving classes so when we do get it I can hand this list to the Board of Education, so they may be put in the class just as deaf children are.

Dr. Clark and Dr. Jones both mentioned light. Several times a day I have people ask me about light—how strong a light they should use. Well, I don't know whether it is 20 feet above them or one foot. Those things have to be gone into. If I remember physics correctly light diminishes according to the distance from its source, and the position of the light that Dr. Jones stressed is exceedingly important. Another law of physics is that the angle of incidence is equal to the angle of refraction, and the light of his bookkeeper was probably so placed that it reflected into his eyes instead of back of him.

Some one mentioned the teaching of ophthalmology and certificates of ophthalmology. I think the certificate has been more valuable in the better preparation of ophthalmologists than any other one thing. Of course when it was first started we hoped the laity would soon hear about it, but few have heard about it in 20 years, but it has stimulated ophthalmologists themselves. In one of our hospitals in Memphis, a man can not be a surgeon in the institution without a certificate, and I think the chances are that will be universal. He might be an assistant or an associate, but he can not hold a surgeonship without such a certificate.

Dr. Hagaman and Dr. Jones both spoke of refraction. The sins of optometrists are often more of omission than of commission. Frequently they are not able to improve vision to normal, and they give the patient the best they have and let him go with a beginning glaucoma or with some ocular defect that might have been removed if he had fallen into your hands.

He mentioned the fact that many ophthalmologists do not like to refract, and I think that is an exceedingly unfortunate situation. At least one-half of the time is spent in refracting, and at least one-half of the surgery comes out of the refraction room, and it is very important that he pay attention to that.

The extraction of the cataract capsule in ordinary hands has been best accomplished by the Aruga forceps. I have tried several types but find the Aruga a very satisfactory instrument.

Dr. Jones mentioned evipal. I have never used it. I have read a number of articles and heard lots of addresses on it. I give very few general anesthetics, never for enucleation except in children. I was thinking of Dr. Jones' case, and I am not sure that he could charge that loss of vision to the arsenicals. It sounded rather like a retrobulbar neuritis which often occurs.

I want to thank you gentlemen again for your kind discussion.

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Blood Chemistry In Kidney Disease*

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Life depends upon metabolism. Metabolism includes constructive and destructive processes. Throughout life there is a constant breaking down of living organized substance with liberation of energy and production of waste products. Broken down substance must be replaced and waste removed. For health, constructive and destructive processes must balance. If materials for repair are not available or if waste is not removed, disease results.

There are several ways by which the body rids itself of waste and prevents its accumulation. Among them the kidneys are important. If their function is completely stopped, death occurs in a few days. Impaired function means disease.

Numerous methods for the determination of the ability of the kidneys to meet normal needs are available. Some give valuable aid in diagnosis and some furnish guides to prognosis and treatment.

Tests of nitrogen retention are among the most valuable. Especially will these aid in the differential diagnosis of renal and cardiac disorders, as heart disease in itself does not cause accumulation of nitrogen in the blood. When nitrogen retention occurs in heart disease, the kidneys are also involved.

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Two classes of nitrogen containing substances are found in the blood: (1) proteins —permanent and essential constituents of the blood, and (2) non-protein nitrogenous substances—partly transformed foodstuffs, which unless utilized by the tissues, circulate until excreted by the kidneys, and partly waste products of metabolism which also must be excreted.

The non-nitrogenous substances will be considered first. When the power of the kidneys to excrete is impaired, these accumulate in the blood. Among the retained non-nitrogenous substances are urea nitrogen, uric acid and creatinine. The usually given normals for 100 c.c. of blood are as follows:

Total Non-Protein Nitrogen	25 to 30 mg.
Urea Nitrogen	12 to 15 mg.
Uric Acid	1 to 3 mg.
Creatinine	1 to 2 mg.

Figures for total non-protein nitrogen parallel those for urea nitrogen and offer so little diagnostic information that cannot more accurately and easily be obtained by estimation of the urea nitrogen, that determinations of total non-protein nitrogen are now only occasionally made.

Urea nitrogen should be determined in every case in which kidney functional impairment is suspected. When impairment is found, urea nitrogen estimations should be repeated frequently as a check on prognosis and treatment.

It should be remembered that some workers report their results in terms of urea rather than urea nitrogen. The urea nitrogen in milligrams multiplied by the factor 2.14 gives the amount of urea in milligrams.

While 12 to 15 mg. per 100 c.c. of blood is considered the normal for urea nitrogen, lower figures are frequently seen. Pregnant women are especially likely to give low estimations, often 5 to 12 mg. Figures for children are the same as for adults.

Urea nitrogen figures of 16 to 29 mg. per 100 cc. of blood are taken to indicate mild impairment of kidney function, figures of 30 to 59 mg. moderate impairment, and figures of 60 to 120 mg. severe impairment. In uremia, urea nitrogen may be 400 mg. but sometimes it is as low as 60 to 70 mg.

CAUSES OF ELEVATED BLOOD UREA NITROGEN

I. BILATERAL DIFFUSE KIDNEY DISEASE. The term "bilateral" is used because the reserve power of the kidneys to carry on makes it possible for one kidney to do the work of two in certain cases and one kidney may be markedly diseased without retention of nitrogen if the other kidney is normal.

A. ACUTE AND SUBACUTE GLOMERULAR NEPHRITIS.—As with some other tests of kidney function, in acute nephritis urea nitrogen may be normal.

CASE 1. White, male, age 44, married, farmer. Dyspnea and general edema.

Date	URINE			BLOOD
1932	Albumin	Casts	Blood	Urea Nitrogen
July 28	Large trace	Some	Some	61.2 mg.
Aug. 4.	1.5%	Few	Many	114.9 mg.
Aug. 13.	12.0%	Some	Some	167.0 mg.

CASE 2. White, male, age 59. Nocturia 4-5, no edema, no headache.

Date	URINE				BLOOD
1931	Albumin	Casts	Pus	Blood	Urea Nitrogen
Jan. 25.	Large trace	None	Few	Many	16.1 mg.
Feb. 5.	1%	Few	Some	Many	52.2 mg.
Feb. 8.	2%	Rare	Some	Many	53.3 mg.
Feb. 11.	2%	None	Few	Numerous	49.0 mg.
Feb. 12.	2%	None	Rare	Many	49.7 mg.
Feb. 18.—Died.					

CASE 3. White, male, age 12. Edema of eyelids and ankles for one week.

Date	URINE			BLOOD
1933	Albumin	Casts	Blood	Urea Nitrogen
Jan. 31.	Slightest possible trace	None	Few	
Feb. 1.	Large trace	None	Many	7.94 mg.
	Concentration slightly impaired.			
Feb. 3	None	None	Few	.

B. CHRONIC DIFFUSE NEPHRITIS.

CASE 4. Colored, male, age 56. Dyspnea, edema of feet and ankles.

Date	URINE				BLOOD
1927	Albumin	Casts	Pus	Blood	Urea Nitrogen
Oct. 28.	1%	None	Some	Num.	134. mg.
Oct. 30.	Trace	Rare	Num.	Num.	
Nov. 3.	Large trace	None	Num.	Some	212. mg.
Nov. 4.—Died.					

CASE 5. White, male, age 56, merchant. Dyspnea, epigastric pain.

Date	URINE				BLOOD
1929	Albumin	Casts	Pus	Blood	Urea Nitrogen
Nov. 26.	Large trace	Some	None	None	30.1 mg.
Nov. 29.	Large trace	Few	Rare	None	20.3 mg.
Dec. 5.	2%	None	None	None	17.5 mg.
Dec. 8.	2%	Num.	Few	Few	
Dec. 10.	6%	Num.	Some	None	39.2 mg.
Dec. 12.—Died.					

C. HYPERTENSIVE CARDIOVASCULAR RENAL DISEASE.—Urea nitrogen retention occurs only in cases with considerable kidney involvement. It rarely occurs early in the disease and may be absent in some advanced cases.

CASE 6. White, female, age 60, housewife.

Headache, dizziness, loss of vision, blood presture 210 systolic and 80 disastolic.

Date		URINE			BLOOD
1935	Albumin	Casts	Pus	Blood	Urea Nitrogen
Sept. 10.	None	None	Many	None	23.4 mg.

CASE 7. Colored, female, age 50. Blood presure 260 systolic and 140 disastolic.

URINE: No albumin; no casts. Blood Urea Nitrogen 7.35 mg.

CASE 8. White, female, age 50. Blood pressure 200 systolic and 120 disastolic.

Urine: No albumin; no casts. Blood Urea Nitrogen 11.68 mg.

D. CONGENITAL POLYCYSTIC KIDNEYS.

CASE 9. White, female, age 47, married.

Date		URINE			BLOOD
1929	Albumin	Casts	Pus	Blood	Urea Nitrogen
Sept. 12.	Large trace	None	None	None	60.2 mg.
Sept. 13.	3%	None	Some	Some	
Sept. 14.—Died.					

CASE 10. White, male, age 60, single.

Date		URINE			BLOOD
1934	Albumin	Casts	Pus	Blood	Urea Nitrogen
Dec. 11.	Slight trace	None	Rare	Num.	63.5 mg.

E. PYELONEPHRITIS.

CASE 11. White, male, age 50, married. Low back pain, nausea, vomiting, abdominal distention, prostration, collapse, chills and fever, bladder frequency and tenesmus.

Date		URINE			BLOOD
1934	Albumin	Casts	Pus	Blood	Urea Nitrogen
Feb. 24.	Trace	Rare	Rare	Numerous	134.5 mg.
Mar. 7.	Trace	Some	Some	None	149.4 mg.
March 10.—Died.					

CASE 12. White, male, age 79, single. Anorexia, prostration, frequency and tenemus. Temperature 100 to 107.4 degrees F.

Date		URINE			BLOOD
1930	Albumin	Casts	Pus	Blood	Urea Nitrogen
Aug. 13.	Large trace	None	Num.	None	48.3 mg.
August 15.—Died.					

F. PYONEPHROSIS.

CASE 13. White, female, age 87.

Date		URINE			BLOOD
1935	Albumin	Casts	Pus	Blood.	Urea Nitrogen
July 30.	Slight trace	None	Many	None	
August 3.—Cystoscopic, Right ureter: No pus.					
Cystoscopic, Left ureter: Many pus cells.					
Sept. 12.	Slight trace	None	Many	None	22.9 mg.

CASE 14. White, male, age 57.

Date		URINE			BLOOD
1926	Albumin	Casts	Pus	Blood	Urea Nitrogen
Feb. 18.	0.5%	None	Many	Some	7.8 mg.
Left Ureter:			Many	Many	
(B. coli and streptococci)					
Feb. 24.	2.0%	None	Many	Numerous	16.8 mg.
Mar. 3.	Trace	None	Many	Some	20.3 mg.
Mar. 12.	Large trace	None	Many	None	16.6 mg.

G. POISONING BY THE HEAVY METALS (MERCURY, LEAD, BISMUTH, ETC.) AND ARSENIC.

H. PASSIVE CONGESTION OF THE KIDNEYS.

II. DEHYDRATION, SUCH AS OCCURS FROM:

A. PROLONGED SEVERE VOMITING AS IN HIGH INTESTINAL OBSTRUCTION.

CASE 15. Colored, female, age 29.

Date		URINE			BLOOD
1932.	Albumin	Casts	Pus	Blood	Urea Nitrogen
July 17.	Large trace	Few	None	None	37.3 mg.

CASE 16. Colored, female, age 35.

Date		URINE			BLOOD
1925.	Albumin	Casts	Pus	Blood	Urea Nitrogen
June 8.	0.5%	Num.	Num.	Some	41.7 mg.

B. GASTRIC OR DUODENAL FISTULA.

C. SEVERE DIARRHEAS SUCH AS CHOLERA.

D. SEVERE BURNS.

It is not positively known whether increased blood urea nitrogen in dehydration is a compensatory measure to maintain osmotic pressure of the plasma at a normal level after excessive loss of salts, whether it is due to decreased efficiency of the kidneys in the excretion of urea with the low urine volume, or whether it is due to the increased protein catabolism of starvation. Probably all play a part. There is a prompt return to normal kidney function after restoration of the fluid and salt content of the blood plasma, indicating little permanent toxic damage to the kidneys in these conditions.

III. OBSTRUCTION IN THE URINARY TRACT. Elevation of urea nitrogen of the blood occurs only in severe cases in which the total urinary output is decreased. It is not found even in complete obstruction of only one ureter if the kidney of the opposite side is functioning well.

A. PROSTATIC ENLARGEMENT.

CASE 17. Colored, male, age 72, married.

Date		URINE			BLOOD
1932	Albumin	Casts	Pus	Blood	Urea Nitrogen
May 25.	Large trace	None	Many	Many	210.7 mg.
June 2.	Large trace	None	Many	Rare	147.0 mg.

CASE 18. Colored, male, age 50, married.

Date		URINE			BLOOD
1927.	Albumin	Casts	Pus	Blood	Urea Nitrogen
Feb. 26.	Trace	None	Num.	None	12.6 mg.
Mar. 1.	Large trace	None	Num.	Rare	9.3 mg.

B. STRICTURE OF URETHRA OR OF BOTH URETERS.

CASE 19. Colored, male, age 56. Impacted urethral calculus.

Date		URINE			BLOOD
1933.	Albumin	Casts	Pus	Blood	Urea Nitrogen
May 4.	3%	None	Many	Many	26.2 mg.

CASE 20. Colored. male, age 52. Stricture of urethra.

Date	URINE				BLOOD
1926.	Albumin	Casts	Pus	Blood	Urea Nitrogen
April 22	Trace	None	None	Many	19.3 mg.

CASE 21. White, male, age 54. Stricture of urethra; extravasation of urine.

Date	URINE				BLOOD
1924.	Albumin	Casts	Pus	Blood	Urea Nitrogen
May 5.	0.5%	Some	Many	Many	22.4 mg.
May 9.—External urethrotomy.					
May 17.					10.3 mg.

UREA NITROGEN FINDINGS

In 127 cases, urea nitrogen findings were as follows:

Cases	Estimations	Low	High	Average
ACUTE NEPHRITIS				
32	45	7.9 mg.	189.4 mg.	47.9 mg.
CHRONIC NEPHRITIS				
58	69	5.0 mg.	212.8 mg.	28.2 mg.
HYPERTROPHY OF PROSTATE				
37	57	5.6 mg.	210.7 mg.	25.4 mg.

URIC ACID

It was formerly thought that uric acid was the first nitrogenous substance to be retained and, therefore, of special value in recognizing early renal disease. This is probably not correct. Holbrook and Haskins report that of 87 nephritics tested, not one of 26 cases showing urea nitrogen retention of 16 to 24 mg. had any uric acid retention, and many with much higher urea nitrogen figures also failed to show any increase of uric acid in the blood. Of the total 87 cases, 80 per cent showed urea nitrogen retention, 60 per cent creatinine retention and only 30 per cent showed uric acid retention. In this 30 per cent, there was very little correlation between the amount of uric acid retained and the clinical condition of the patients.

The normal is generally considered to be 1 to 3 mg. per 100 c.c. of blood.

Estimations of uric acid may prove of some value in conditions other than nephritis and especially in gout.

URIC ACID FINDINGS

In 48 cases, uric acid findings were as follows:

Cases	Estimations	Low	High	Average
ACUTE NEPHRITIS				
13	18	1.4 mg.	25.0 mg.	5.9 mg.
CHRONIC NEPHRITIS				
27	28	1.3 mg.	10.0 mg.	4.7 mg.
HYPERTROPHY OF PROSTATE				
8	8	2.0 mg.	8.3 mg.	4.2 mg.

CREATININE

Estimations should be made in every case in which the urea nitrogen is above 20 mg. per 100 cc. of blood, and are chiefly of value in prognosis and as a check on the urea nitrogen estimations.

Creatinine is more easily excreted than urea so that retention does not occur until there is marked renal impairment. If blood creatinine is 5 mg. or more per 100 c.c. of blood in chronic nephritis, a fatal outcome may be expected. Myers and Killian reported that 81 of 83 such cases died within a few months. This does not always hold in acute nephritis.

Sometimes the clinical appearance of the patient may seem to improve while the increasing blood creatinine is the only guide to the actually grave condition. A low creatinine in a patient whose condition seems grave is a favorable sign. This also may not be true in acute **nephritis.**

CASE 22. White, male, age 58. Acute nephritis.

Date	URINE				BLOOD	
1931	Albumin	Casts	Pus	Blood	Urea N.	Creatinine
Jan. 26	L.T.	None	Few	Many	16.1mg.	3 mg.
Feb. 5	1%	Few	None	Many	52.2.mg.	6.7mg.
Feb. 8	2%	Rare	Num.	Many	55.3mg.	7.5mg.
Feb. 11	2%	None	Few	Num.	49.0mg.	10.0mg
Feb. 12	2%	None	None	Many	49.7mg.	15.0mg.
Feb. 18.—Died.						

CREATININE RETENTION

Condition	Color	Sex	Age	Creatinine	Outcome
Acute Nephritis	Negro	F	32	24.0mg.	Died 2 mo.
	White	M		12.0mg.	Died 1 day
	White	F	42	12.0mg.	Died 2 days
	White	M	58	15.0mg.	Died 6 days
Chronic Nephritis	White	M	41	6.4mg.	Died 3 days
	Negro	M	56	10.0mg.	Died 1 day
	Negro	M	49	9.0mg.	Died 4 weeks
Pyelo-Nephritis	White	M	50	6.0mg.	Died 3 days
Uremia	White	M		6.4mg.	Died 2 days
Hypertrophy Prostate	Negro	M	69	12.0mg.	Died 1 week
	Negro	M		5.4mg.	Died 22 days
Polycystic Kidneys	White	F	53	10.0mg.	Died 2 weeks

CREATININE FINDINGS

In 84 cases creatine findings were as follows:

Cases	Estimations	Low	High	Average
ACUTE NEPHRITIS				
29	43	1.2 mg.	24.0 mg.	4.1 mg.
CHRONIC NEPHRITIS				
36	40	1.1 mg.	12.0 mg.	2.5 mg.
HYPERTROPHY OF PROSTATE				
19	23	1.0 mg.	5.4 mg.	2.0 mg.

ALKALI RESERVE

Acidosis due to normally formed acids such as acid sodium phosphate and loss of base may occur in advanced stages of kidney disease with retention of nitrogen. If such patients are given alkalies or placed on a basic diet, alkalosis may develop. Hence, alkali reserve estimations should be made frequently in all patients with blood urea nitrogen over 20 mg. per 100 c.c. The diet and alkali intake can then be regulated to keep the alkali reserve normal. This may be life-saving. Alkalies or acids should never be given to patients with impaired kidney function unless the alkali reserve is frequently determined as a check on dosage. The reaction of the urine is not a safe guide.

The normal is usually given as 50 to 80 for adults and 40 to 60 for infants, young children, and women during the last four months of pregnancy.

In kidney disease, alkali reserve findings may be interpreted as follows:

40 to 50—mild acidosis with usually no clinical symptoms.

30 to 40—moderate acidosis, with definite symptoms.

8 to 30—severe acidosis, usually with coma. If below 16, immediate and efficient treatment only will bring recovery.

80 to 90—mild alkalosis, usually with no symptoms.

90 to 120—marked alkalosis, usually associated with symptoms of tetany.

BLOOD CHLORIDES

Chloride retention is probably not caused by impaired kidney function in itself, although it may occur in nephritis. Blood chlorides may be increased in anemia and anemia sometimes accompanies nephritis. Low blood chlorides may be found in dehydration and nephritis may be responsible for such causes of dehydration as severe vomiting and diarrhea. It is important to know in interpreting reports of chloride estimations whether the whole blood or the plasma was used. The normal, expressed as sodium chloride, in whole blood is about 350 to 550 mg. per 100 c.c., and in plasma 570 to 620 mg.

A knowledge of the blood chloride level in kidney disease is of chief value as a guide to the regulation of the salt intake. In former days it was common to place a patient with nephritis on a routine salt restricted diet and this may still persist. Salt is very necessary to the human body and, of course, should not be restricted unless there is a definite reason for it. If blood chlorides are low, salt should be given to bring them to normal.

CHLORIDE FINDINGS

In 26 cases plasma chloride findings were as follows:

Cases	Estimations	Low	High	Average
ACUTE NEPHRITIS				
9	9	270 mg.	776 mg.	448 mg.
CHRONIC NEPHRITIS				
17	19	390 mg.	980 mg.	582 mg.

BLOOD CHOLESTEROL

In kidney disease, blood cholesterol is of principal interest in nephrosis. There is till some uncertainty as to what is the normal cholesterol content of the blood. Figures often given are 140 to 170 mg. per 100 cc. Others give the normal limits as from 100 to 230 mg. High values are constantly found in nephrosis. Cholesterol may be increased in some cases of nephritis.

PLASMA PROTEINS

The proteins of the plasma, so far as kidney disease is concerned, are of most interest in nephrosis and glomerular nephritis with edema. Normal figures vary in textbooks. Osgood gives the following:

Fibrin, 0.20 to 0.40 grams per 100 c.c. (3 to 6% of total proteins)

Globulin, 1.00 to 3.00 grams per 100 c.c. (15 to 35% of total proteins)

Albumin, 4.00 to 5.80 grams per 100 c.c. (60 to 80% of total proteins)

Total, 6 to 8 grams per 100 c.c.

The albumin-globulin ratio varies from 2 to 5. Edema is usually present when the total proteins fall below 5.5 grams per 100 c.c. or the albumin fraction falls below 2.5 grams per 100 c.c.

Decreased total proteins are due chiefly to diminished albumin, with high fibrin and relatively or absolutely high globulin, so that the albumin-globulin ratio is reversed. This change occurs to the greatest extent in nephrosis and amyloidosis and to a lesser degree in glomerular nephritis with edema and some other extrarenal conditions.

As with chlorides, in the past patients with nephritis have often been placed on low protein diets without any other reason than that albumin was found in the urine. It is now known that withholding protein may be extremely harmful because if protein is not furnished by the food, the body will use its own protein to its detriment. This is especially true in nephrosis when there is a large and constant loss of protein in the urine. Estimations of the plasma proteins furnish a guide to the regulation of proteins in the diet.

CASE 23. White, male, age 6. Nephrosis or glomerular nephritis. Blood pressure 118 systolic and 70 diastolic. Nausea and vomiting, general edema, ascites.

URINE: Specific gravity 1.030; albumin 12% (by volume); many hyaline, rare finely granular casts; no blood.

BLOOD: Hemoglobin 72%; color index 0.85. Urea nitrogen 5 mg. per 100 c.c.; uric acid 6.2 mg; creatinine 1.1 mg.; chlorides 520 mg.; cholesterol 213 mg.; plasma proteins: fibrin 0.32 gms., globulin 3 gms., albumin 3.28 gms. Total 6.6 gms.

The above case is presented as not typical in all respects of either nephrosis or glomerular nephritis but with features suggestive of both. The practical point is that while the albumin in the urine is excessive, protein foods should be given rather than withheld to compensate for the great and constant loss.

Blood chemistry properly used and repeated is a great aid to the physician in doing most for his patients with kidney disease.

REFERENCES

The following have been freely consulted and quoted:

Osgood, Edwin E.: A Textbook of Laboratory Diagnosis, 2nd edition, 1935, P. Blakiston's Son & Co., Philadelphia.

Todd, James Campbell, and Sanford, Arthur Hawley: Clinical Diagnosis by Laboratory Methods, 8th edition, 1935, W. B. Saunders Co.

DISCUSSION

Dr. E. T. White (Greenville): I enjoyed Dr. Lippincott's paper very much and I think we should have more papers of this type read befor our society. There is nothing that I can add in this discussion as he has covered the subject thoroughly but I would like to stress a few points.

I was glad to hear that he is depending upon urea nitrogen determinations more and doing less non-protein nitrogen determinations. I believe that a urea nitrogen will give you just as much information as the N. P. N. and does not have any of the disagreeable odors that you get in determining the N. P. N.

In cases suffering from prostatic obstruction a urea nitrogen determination is very important. When we get cases of this kind with high ureas we treat them until the urea nitrogen drops to 20 mg. or lower before operating upon them. By this method of determining when to operate it is seldom that we have any postoperative trouble with these patients.

Another point I would like to stress is the importance of creatinine retention in prognosis. When the creatinine is over 4 or 5 mg. in chronic nephritis it invariably means an early death but with acute cases this may not be so. I recall three young men with creatinines above 4 mg. One was a truck driver, who came to the office for some minor complaint. A routine urinalysis showed a little albumin and a few granular casts. A blood chemistry determination showed a creatinine of a little more than 5 mg., but his urea was not extremely high. This patient died in a few weeks. A second case was a young man who showed only a little albumin and a few casts in his urine but had a high blood pressure. Blood chemistry revealed a creatinine retention of 4.5 mg. We told his father that his son's time was limited. This was in the spring of the year and the old man wanted to know how long I thought he would live. Just taking a guess at it I told him until about July 4th. The young man died on July 3rd.

The third case that I recall was a young man who developed an acute nephritis complicating an operation for a gall-bladder condition. This patient's urea went to over 100 mg. and the creatinine to as high as 12 mg. but he completely recovered and lived for eight years. His death was due to drowning by driving his car into the bogue accidentally.

Again I wish to express my appreciation to Dr. Lippincott for bringing to our society this valuable paper on blood chemistry in kidney diseases.

Mississippi State Medical Association

ORGANIZED 1867

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Manuscripts and all material for publication should be addressed to the editor, P. O. Box 303, Vicksburg, Mississippi.

EDITORIALS

WHO IS AT FAULT?

During the past summer there has been established at the Mississippi State Charity Hospital in Vicksburg an out-patient clinic under the auspices of the county medical society. Members of the society serve in the clinic, and good work is being done for those in need.

Recently a doctor, still young, in practice for several years in a community not far distant, made the suggestion that if the medical society really wanted to accomplish something it should establish a diagnostic clinic at the charity hospital where "country doctors" might send their patients for diagnosis, the patients then to be returned with full reports to their home physicians for treatment, no charges to be made for diagnostic procedures although the patients were able to pay their home doctors. When it was mentioned that patients who were able to pay their home doctors should properly be expected to pay within their means for diagnostic consultations, the young doctor let it be known that his patients had only enough for him.

More startling, another statement to the effect that "when we 'country doctors' have given quinine, bromide, and neosalvarsan and the patient does not get well, we do not know what to do."

Of course, the people soon learn and will take care of the local situation, but there is a reflection on the profession. There is a fault that should be remedied. Where does it lie?

We are all country doctors in Mississippi. Many, even in the smallest communities, are doing outstanding work. They read, they attend medical meetings, take postgraduate study,—they keep up. They need not hesitate to stand up in national meetings. They are recognized. They should be able to solve the problem.

What is the remedy?

SOUTHERN MEDICAL ASSOCIATION

The Thirtieth Annual Meeting of the Southern Medical Association will take place in Baltimore, Maryland, Tuesday, Wednesday, Thursday and Friday, November 17 to 20, 1936.

An outstanding program shows the names of some of the greatest men in medicine and surgery in the South and in the country. The subjects are timely and of practical interest.

Among the essayists and those chosen for discussions are a number of our own Mississippi doctors,—Dr. Frank M. Acree, Greenville; Dr. John A. Beals, Greenville; Dr. Frank L. Van Alstine, Jackson; Dr. A. G. Wilde, Jackson; J. A. Milne, of the Mississippi State Board of Health; Dr. Felix J. Underwood, Jackson; Dr. Leon S. Lippincott, Vicksburg; Dr. John F. Lucas, Greenville; Dr. George E. Riley, Jackson; Nelson H. Rector of the Mississippi State Board of Health.

Dr. Felix J. Underwood, Jackson, a past president of the Association, is a member of the Board of Trustees; Dr. Harvey F. Garrison, president of the Mississippi State Medical Association, is a councilor; Dr. George E. Riley, Jackson, is vice-chairman of the National Malaria Committee.

Features of the meeting will be alumni reunions, fraternity luncheons, scientific exhibits, technical exhibits, moving pictures of scientific subjects, hospital clinics and general clinical sessions.

The Woman's Auxiliary will meet at the same time.

Baltimore is a medical center, extensive entertainment has been planned for spare moments, and Mississippi doctors will be well repaid for a week spent in improving their knowledge, greeting old friends, and enjoying needed relaxation.

STATE HOSPITAL COMMISSION MINIMUM REQUIREMENTS TO CONSTITUTE A STANDARD HOSPITAL

(Mississippi Legislature, Regular Session 1936, Senate Bill No. 223, Chapter 178, Laws of 1936, Section 4.)

Adopted at a meeting of the Commission, July 10, 1936.

1. All hospitals shall have modern and efficient buildings which are separate and apart from any other building and operated solely for hospital purposes.
2. Physicians and surgeons privileged to practice in the hospital shall be organized as a definite group or staff; the word "staff" to include all doctors who practice in the hospital.
3. Membership on the staff shall be restricted to physicians and surgeons who are (a) full graduates of medicine residing in this state, and members of their respective county medical societies and of the Mississippi State Medical Association; (b) competent in their respective fields; and, (c) worthy in character and in matters of professional ethics. In this latter connection the practice of the division of fees, under any guise whatever, is prohibited.
4. The staff shall initiate and, with the approval of the governing board of the hospital, adopt rules, regulations, and policies governing the professional work of the hospital; all doctors shall read and sign the rules and regulations upon election to the staff. These rules, and regulations, and policies shall specifically provide:

(a) That staff meetings be held at least once each month.

(b) That the staff review and analyze at the monthly staff meeting their clinical experiences in the various departments of the hospital, such as medicine, surgery, obstetrics, and the other specialties; the clinical records of patients, free and pay, to be the basis of such review and analysis.

5. Accurate and complete records shall be written for all patients and filed in an accessible manner in the hospital—a case record to include at least: indentification data; complaint; personal and family history; history of present illness; physical examination; special examinations, such as consultations, clinical laboratory, x-ray, and other examinations; provisional or working diagnosis, medical and surgical treatment; gross pathological findings; microscopic pathological findings when indicated and possible; progress notes; final diagnosis; condition on discharge; and, in case of death, autopsy findings when possible to obtain.

6. Diagnostic and therapeutic facilities under competent supervision shall be available for the study, diagnosis and treatment of patients, these to include at least (a) clinical laboratory and (b) an x-ray department.

7. At least one doctor competent in the practice of surgery and one doctor competent in the practice of internal medicine, residing in the town or city in which the hospital is located, shall be available at all times.

8. Competent nursing service shall be available at all times and the superintendent of nurses shall be a graduate nurse registered in Mississippi.

9. A physician or registered nurse trained in anesthesia shall administer all anesthetics to patients.

SICKNESS INSURANCE

Dr. G. S. Bryan's recent editorial in the September issue of this magazine upon the administration of the per capita appropriation for the indigent sick, and the admonition it carries, will bear frequent repetition.

The proper administration of this law becomes doubly important when it is realized that similar legislation, as for the indigent, may be necessary to solve the problem of our patient of **moderate means.** It is generally realized that his is an even greater problem, and unless his income be increased by better distribution of wealth, or unless sickness insurance be proven satisfactory, the State may be expected to make appropriation for his proper medical care. If this prove necessary, could not it be applied in the form of a partial payment of his hospital bill? Such a plan would result in bettering our private hospitals, which are rarely paying institutions, and maintain the personal relation of physician and patient so important to both. It would obviate the necessity of the State's building hospitals and employing salaried physicians.

Organized medicine must see, however, that any such plan does not interfere with the collection of or set rates for physician's fees.

H. G. COOK

Hattiesburg
September 16, 1936.

LETTERS TO THE EDITOR

I have been intending to answer your letter ever since I received it but probably would not, if I had not read it again in the last issue of The Mississippi Doctor. I was afraid we were making a mistake in quitting the New Orleans Journal but am well pleased the way you are editing it and think it is improving. Our county has only six active physicians, widely separated and it would be almost impossible to have a county society, hence we have no proceedings to publish. I think you should publish articles helpful to us backwoods fellows but interspersed with something to keep us awake. I will be glad to help you anyway I can in looking up anything you may need from my section.

DIRECTORY AND CALENDAR OF MEDICAL SOCIETIES

Information is not complete. Secretaries of societies are urged to send in full data so that it may be known when the societies of the state meet; also the names of the officers directing their activities this year should be known.

MISSISSIPPI STATE MEDICAL ASSOCIATION:

Seventieth Annual Session and Thirty-fourth Annual Session of the House of Delegates, Meridian, May 11, 12, and 13, 1937.

Adams County Medical Society: W. K. Stowers, Natchez, president; F. S. Dixon, Natchez, secretary. Meets third Tuesday each month, Natchez, 7:30 p. m.

Amite County Medical Society: D. H. Thornhill, Crosby, secretary.

Central Medical Society: E. L. Walker, Magee, president; L. W. Long, Jackson, secretary. Meets first Tuesday each month, Robert E. Lee Hotel Roof, Jackson, 7:00 p. m. except July and August.

Claiborne County Medical Society: E. P. Jones, Hermanville, president; G. W. Acker, Port Gibson, secretary.

Clarksdale and Six Counties Medical Society: D. O. Pierce, Jonestown, president; N. C. Knight, Clarksdale, secretary. Meets fourth Wednesday of March and second Wednesday of November, Elks Club, Clarksdale, 2 p. m.

Clarke-Wayne Counties Medical Society: W. P. Gray, Waynesboro, president; Albert Hand, Shubuta, secretary.

Coahoma County Medical Society: J. A. Slack, Friars Point, president; N. C. Knight, Clarksdale, secretary. Meets second Wednesday each month, Clarksdale Hospital, Clarksdale, 1:30 p. m.

Delta Medical Society: J. W. Lucas, Moorhead, president; F. M. Acree, Greenville, secretary. Meets second Wednesday of April and October. Rotates through five counties, 2 p. m.

DeSoto County Medical Society: J. M. Wright, Hernando, president; L. L. Minor, Rt. 4., Memphis, secretary. Meets first Monday of January, April, July, October, Hernando, 10 a. m.

East Mississippi Medical Society: C. H. Gully, DeKalb, president; T. L. Bennett, Meridian, secretary.

Franklin County Medical Society: L. Costley, Meadville, secretary.

Hancock County Medical Society: A. P. Smith, Bay St. Louis, secretary.

Homochitto Valley Medical Society: Lucien S. Gaudet, Natchez, president; W. K. Stowers, Natchez, secretary. Meets January, April, July and October, 2:00 p. m.

Issaquena-Sharkey-Warren Counties Medical Society: T. P. Sparks, Jr., Vicksburg, president; Leon S. Lippincott, Vicksburg, secretary. Meets second Tuesday each month, Mississippi State Charity Hospital, Vicksburg.

Jackson County Medical Society: W. J. Weatherford, Pascagoula, president; R. G. Lander, Pascagoula, secretary. Meets second Thursday of March, June, September and December, Jackson County Hospital, Pascagoula, 7 p. m.

Jefferson County Medical Society: W. T. Harper, Fayette, secretary.

Newton County Medical Society: W. T. Pennington, Decatur, president; Dudley Stennis, Newton, Secretary.

North Mississippi Medical Society: R. G. Grant, Holly Springs, president; A. H. Little, Oxford, Secretary.

Northeast Mississippi Thirteen Counties Medical Society: Z. A. Dorsey, Troy, president; A. J. Stacy, Tupelo, secretary. Meets third Tuesday, March, June, September and December.

Pike County Medical Society: J. L. Bauer, McComb, president; Elise Rutledge, McComb, secretary. Meets first Thursday each month, McComb, 6:30 p. m.

Pontotoc County Medical Society: L. O. Carruth, Tupelo, R.F.D., president; O. F. Carr, Pontotoc, secretary. Meets first Tuesday each month, Pontotoc.

South Mississippi Medical Society: J. P. Culpepper, Hattiesburg, president; Carlton Temple, Hattiesburg, secretary.

Stone County Medical Society: Earl W. Green, Wiggins, secretary. Meets with Harrison-Stone-Hancock Counties Medical Society.

Tate County Medical Society: W. D. Smith, Senatobia, president; J. Sidney Eason, Coldwater, secretary. Meets second Wednesday each month, Senatobia.

Tri-County Medical Society: B. L. Crawford, Tylertown, president; R. B. Zeller, Hazlehurst, secretary. Meets second Tuesday of March, Coplah-Lincoln Junior College, Wesson; June, Walthal Hotel, Tylertown; September, Riverside Hotel, Monticello; December, Whitworth College, Brookhaven, 12:30 p. m.

Wilkinson County Medical Society: E. M. Butler, Centreville, secretary.

Winona District Medical Society: P. B. Brumby, Lexington, secretary.

MISSISSIPPI HOSPITALS—CALENDAR OF STAFF MEETINGS

MISSISSIPPI STATE HOSPITAL ASSOCIATION:

Eighth Annual Session, Meridian, May 10, 1937.

Anderson Infirmary: Second Friday, each month, 6:00 p. m.

Biloxi Hospital: First Friday, each month, 7:30 p. m.

Clarksdale Hospital: Second Wednesday, each month, 1:30 p. m.

George C. Hixon Memorial Hospital: First Monday, each month.

Greenwood Leflore Hospital: First Thursday, each month, 7:30 p. m.

Houston Hospital: Last Thursday, each month.

Jackson County Hospital: Second Thursday, each month except July and August, 7:00 p. m.

Jackson Infirmary: Last Tuesday, each month, 6 p. m.

King's Daughters Hospital, Rosedale: First Tuesday, each month, 8 p. m.

Meridian Sanitarium: Second Thursday, each month, 6:30 p. m.

Mississippi Baptist Hospital: Third Tuesday, each month, 6:30 p. m.

Natchez Sanatorium: Second Tuesday, each month 7:30 p. m.

Northeast Mississippi Hospital: First Monday, each month, 7:30 p. m.

Pontotoc Clinic: First Tuesday, each month, 7:30 p. m.

Rush's Infirmary: Second Thursday, each month, 7:00 p. m.

South Mississippi Infirmary: Last Thursday, each month, 5:00 p. m.

U. S. Veterans Hospital, Gulfport: Every Monday, Tuesday, Wednesday, and Thursday, 10:45 a. m.

Vicksburg Hospital: Second Thursday, each month 7:00 p. m.

Vicksburg Infirmary: First Wednesday, each month, 7:00 p. m.

Vicksburg Sanitarium: Tenth or in week of tenth each month, 6:30 p. m.

Winona Infirmary: First Thursday, each month, 7:30 p. m.

STATE BOARD OF HEALTH

The Crippled Children's Service of the State Vocational Board, with the cooperation of the State Board of Health, has arranged a series of clinics for taking care of Mississippi children crippled by infantile paralysis since June 1. The total number of cases reported now stands at 110.

The first clinic was held Sept. 16 in Iuka for cases in Tishomingo County; the second one, Sept. 18 at Corinth for cases of Alcorn, Tippah, and Prentiss Counties. Other clinics are for Columbus on Sept. 24 and Tupelo the 26th, and one in Clarksdale on Oct. 3. Scattered cases in central and south Mississippi will be cared for early in October.

The clinics are in charge of a competent orthopedic surgeon assisted by nurses with orthopedic training and these nurses will do follow-up work with the cases over a period of several months. No cutting operations are to be performed. The clinics are for the purpose of applying restraining splints, braces and the like to prevent as much deformity as possible and minimize the amount of operating needed later to give the children useful limbs.

The Crippled Children's Service will provide the surgeons and the nursing service and local communities will be asked to provide a suitable place for the clinics to be conducted and arrange for transportation of the cases to and from the clinics.

Since the last Legislature failed to make the necessary appropriation for matching federal funds for crippled children's service under the Social Security Act, in view of the present emergency, Dr. Felix J. Underwood, member of the State Vocational Board, appealed to Dr. Wm. DeKleine, Medical Director of the American Red Cross, and secured $2,625 for this purpose, and Mr. F. J. Hubbard, State Director of the Vocational Board, was able to secure federal funds to match the $2,625 from the Red Cross. This makes available $5,250 to employ orthopedic surgeons and nurses, and to purchase materials and appliances necessary for the successful prosecution of this program of early restoration and rehabilitation.

Mr. J. B. Wheeler and Mrs. J. F. McDougal, State Supervisors of the Crippled Children's Service are visiting the various locations several days prior to the clinics to confer with the local health officers and other authorities to make preliminary arrangements.

The State Board of Health was fortunate in obtaining approval of a project submitted to the WPA to place one woman in each of seventy-five counties in Mississippi to check current birth and death registrations. Practically all the positions on this project have been filled. It is the earnest desire of the Board of Health to secure as near one hundred per cent birth and death registration as possible. This is particularly difficult in Mississippi owing to the fact that so many deaths occur without medical attention and owing to the fact that almost fifty per cent of the births in the State are not attended by physicians. The doctors are cooperating in a gratifying way with the Board of Health, but there are a few physicians who are prone to delay making these reports. Delays are not so common now as they were a few years ago.

The Health Education Division, in the initial stages of organization, plans a careful survey of health needs and health problems in the state before making a definite program. Tentatively, however, and with the realization that the health educational program must be flexible enough to meet the varying needs of individual communities, this Division aims in time to cover three recognized phases of such work: popular health instruction, utilizing newspapers, the radio, health literature and other well-known means of reaching the public, and working through community leaders and organizations; teacher-training; and school health education. The last phase, primarily a function of the Department of Education, will be undertaken in an advisory capacity and with the assistance of official and voluntary health agencies.

In an effort to improve environmental conditions and reduce filth-borne diseases, the Mississippi State Board of Health has carried on through the various Federal work-relief programs an intensive sanitary toilet construction campaign using material furnished by the property owners and relief labor. This program is effective only in rural areas and unsewered sections of incorporated communities. During the present Works Progress Administration program this project has been in effect in seventy-six counties in the State and approximately 1,000 people are employed and approximately 21,000 concrete sanitary pit toilets have been constructed. Including those built during CWA and ERA approximately 45,000 sanitary units have been constructed in the State with the cooperation of the various Federal Relief Agencies. All of this work has been sponsored by the State Board of Health and has been under the direct supervision of the Division of Sanitary Engineering.

It is felt that this work will have a great influence on the reduction of filth-borne diseases, particularly typhoid fever. Since 1932 there has been a reduction of 61 per cent in typhoid fever cases occurring in the State.

Miss Gladys Eyrich, supervisor of mouth hygiene for the State Board of Health, was one of twenty post-graduate instructors at the annual convention of the Texas Dental Society in Dallas August 21-September 4. The subject of her paper was "Putting Teeth in the Public Health Program." This was one of the largest dental meetings ever held in the Southwest, 1500 men from all parts of the United States being present.

FELIX J. UNDERWOOD,
Executive Officer.

Jackson,
Sept. 17, 1936.

MISSISSIPPI STATE BOARD OF HEALTH

Scholarships for graduate study available through Social Security funds to Mississippi public workers have been awarded to the following:

Dr. L. A. Barnett, director of LeFlore County Health Department—three months' scholarship to Vanderbilt University, beginning Sept. 21.

Dr. R. G. Lander, director of the Jackson County Health Department—three months' scholarship to Vanderbilt University, beginning Sept. 21.

Dr. I. B. Trapp, director of the Union County Health Department—one year's scholarship to Harvard University School of Public Health.

Loyal W. Murphy, sanitation supervisor of the Pike County Health Department—four months' scholarship to Yale University, beginning Oct. 1.

Joseph E. Johnston, advisory sanitation supervisor of the State Board of Health—four months' scholarship to Yale University, beginning Oct. 1.

C. M. Ledbetter, assistant sanitary engineer of the State Board of Health—one year's scholarship to Harvard School of Engineering, beginning Oct. 1.

Cy Emery, sanitation supervisor of the Pearl River County Health Department—three months' scholarship to Vanderbilt School of Engineering, beginning Sept. 21.

Jean Norris, sanitation supervisor of the Sunflower County Health Department—three months' scholarship to the Vanderbilt School of Engineering, beginning Sept. 21.

James Lary, Sanitation Supervisor of the Leflore County Health Department — three months' scholarship to the Vanderbilt School of Engineering, beginning Sept. 21.

Mrs. Verna Clark, R. N., of Warren County Health Department—four months' scholarship to Vanderbilt University.

Mrs. Alice Gilliam, R. N., of Holmes County Health Department—four months' scholarship to Vandervilt University.

Miss Selma Rhodes, R. N., of Pike County Health Department—four months' scholarship to Vanderbilt University.

Miss Bessie Bornman, R. N., state district supervisor—four and one-half months' scholarship to Columbia University.

Mrs. Edith Gleason, R. N., of Lafayette County Health Department—four and one-half months' scholarship to Columbia University.

Dr. C. R. Gillespie has been appointed as acting health officer for Leflore County during the absence of Dr. Barnett and Dr. Ray H. Biggs has been appointed as acting health officer for Union County during the absence of Dr. Trapp.

Dr. George W. Mast has been appointed director of the Holmes County Health Department effective Sept. 22. Dr. C. J. Vaughn, who was the director of this county health department, resigned to enter private practice at Fort Payne, Alabama.

Dr. R. J. Jones has been appointed director of the Pearl River County Health Department to relieve Dr. G. E. Godman who resigned to enter private practice at Quitman.

Dr. A. L. Gray, of the Division of Epidemiology and Miss Margaret Meade, nurse investigator with the same division, have completed their study of the communicable disease control program in Jackson County and are now making a study of the program in Pearl River County.

The full-time health department in Washington County has secured additional funds to employ a dental hygienist.

The dental chairman in Winston County secured funds from the Board of Supervisors to employ a dental hygienist through the school term. There is no full-time health department in Winston County.

The Division of Sanitary Engineering of the Mississippi State Board of Health has been very fortunate in securing a year's scholarship for Mr. C. M. Ledbetter, assistant sanitary engineer with the department. This scholarship provides for nine months' study in postgraduate work in sanitary engineering at Harvard University.

By having a member of the staff take advantage of this post-graduate work the Division of Sanitary Engineering will be in a position to render better service to municipalities in public health problems dealing with water supplies, water purification, and sewage treatment in particular.

With the rapid advance made in recent years in the whole field of water treatment and purification and sewage treatment, the division has always felt the need of more advanced study along this line. The course being pursued by Mr. Ledbetter at Harvard University will well equip him to handle better the technical problems along this line.

BIRTH CERTIFICATES

The doctors of Mississippi are urged to secure the name, if at all possible, for each baby before or at the time the birth certificate is made. A birth record without the name is hard to identify after a lapse of several years. A recent check showed that approximately 100,000 white children born in Mississippi between November 1, 1912 and December 31, 1927, have no names on their birth certificates. This is unfortunate and those checking birth registration have been instructed to call attention of the people constantly to this list which hangs in the courthouse corridor. However, a doctor should not delay a birth certificate because of lack of name of the baby. The certificate should be filed promptly, but every effort should be made to get the mother to furnish the name before the cerificate is filed.

UNIFORM TRAFFIC REGULATIONS

Dr. R. N. Whitfield, Director of Vital Statistics, who has been greatly interested in traffic safety for several years, was invited to represent Mississippi at a conference in Washington on Oct. 1 and 2. This conference was held under the auspices of the Department of Commerce and was attended by representatives from at least forty states. The keynote of the conference was that all the states should have uniform traffic laws and regulations for motor vehicles. It was brought out in the conference that since the Interstate Commerce Commission has been empowered by Congress to regulate interstate buses and freight trucks, it would be but a step farther for this Commission to pass uniform regulations governing all kinds of motor vehicles using United States highways.

Each physician in Mississippi should be actively interested in getting the Uniform Drivers' License Law enacted by the next Mississippi State legislature. Members of the medical profession in Mississippi, with very few exceptions, make their income by traveling the highways and byways of the State. They should be keenly alive to any measure that will add to their safety. By all means no drivers' license law should be passed in Mississippi that is not enforced by State highway patrolmen, or by State police.

HEALTH EDUCATION

One of the initial steps in the organized health education activities of the State Board of Health is a proposed series of radio programs. The primary purposes of the broadcasts, designed for popular health instruction, is to inform the public concerning the functions of the State Board of Health, public health problems, and the policies of the State Board of Health, public health problems, and the policies of the health department in solving these problems; to secure desirable changes of opinions and habits on the part of the public; and to stimulate taxpayers and influential groups to action in acquiring necessary facilities for adequate health work.

The first series of talks, beginning in November, will concern the functions of the State Board of Health and each staff member will tell how these functions are carried out through his division.

FELIX J. UNDERWOOD,
Executive Officer

Jackson, Oct. 14, 1936.

EMERGENCY RELIEF ADMINISTRATION DISBURSING ORDERS MISSISSIPPI STATE BOARD OF HEALTH

Jackson, Miss.
October 13, 1936

Dear Doctors:

The Emergency Relief Administration has informed me that its records show that some $1500 in Disbursing Orders issued to specific doctors and to "Any Doctor in the County" have never been presented for payment. The ERA is eager to pay these orders and perhaps you may have some misplaced in your office, or may have them in your files which you gave up payment of when the ERA closed.

If you will send any original ERA Disbursing Order to

BUFORD YERGER
New Capitol
Jackson, Miss.

he will be glad to make payment. If you know of an order which you have lost, it is possible that you may be able to secure payment by identifying the order by approximate date, name of the person for whom you rendered service, and the amount.

No Rural Rehabilitation order can be paid by Mr. Yerger, but he can refer you to proper authorities if you have any of them unpaid.

Please address your correspondence in regard to this matter to Mr. Yerger, since my only connection is to advise you that you may be able to collect some accounts which you have perhaps regarded as hopeless.

Very truly yours,
FELIX J. UNDERWOOD, M.D.

AMOEBIC DYSENTERY

Dr. Felix J. Underwood, Executive Officer, Mississippi State Board of Health is asking the opinions of medical men of different sections of the State about the prevalence of Endamoeba histolytica. His letter follows:

October 1, 1936

I should like to have opinions from the medical men of the different sections of the State about the prevalence of Endamoeba histolytica. We have always had cases of amoebic dysentery in Mississippi, but during the past five years the number of cases and deaths has greatly increased as you will see from the table given below which represents cases reported by physicians and deaths since January 1, 1931.

CASES				DEATHS			
Year	Total	White	Colored	Year	Total	White	Colored
1931	516	381	135	1931	11	6	5
1932	481	360	121	1932	14	3	11
1933	892	647	245	1933	13	9	4
1934	932	670	262	1934	20	10	10
1935	848	629	219	1935	17	10	7

It is my personal belief that we are facing a serious situation. Several physicians have voluntarily written me that there has been a marked increase in the number of patients they are finding in their clinical work infected with endamoeba histolytica and several physicians have themselves had the infection. Some of them were cases of acute dysentery while a large proportion of the cases gave symptoms of a very indefinite character, more often complaining of indigestion, colitis, and symptoms that would lead one to suspect appendicitis.

This condition, from all reports, has not been local in character, but is true from the Tennessee line to the Gulf and from Columbus on the eastern side of the State to Greenville on the west. No doubt many of these patients are carriers because during the past two or three years there has shown up an unusually large number of people infected. Some good clinicians who are careful about diagnosis and depend upon a good laboratory say they are seeing as many as two or three cases a week.

Most of the patients reported eating uncooked vegetables which we know may be a fertile source of the distribution of the disease. Dr. Hugh Gamble said that he had an acute attack which he believed could be directly traceable to eating head lettuce.

I have thought that if the situation proves to be as serious as I think it is over the State that it would be a good thing to try to get Colonel Charles F. Craig, Professor of Tropical Medicine at Tulane University, to visit medical societies as rapidly as possible and speak upon the diagnosis and treatment of this disease. I believe he knows more about amoebic dysentery than any other man living today. I feel that if I could get the money from some source to pay him an honorarium and expenses for such lectures that they would be well worth the money spent.

In my judgment, we should not wait until a large percentage of our people are infected, but should act now. Please let me know your experience and your thoughts relative to the situation and the remedy for it.

Very truly yours,
FELIX J. UNDERWOOD, M.D.

MISSISSIPPI UNEMPLOYMENT COMPENSATION LAW

For the information of the members of the Mississippi State Hospital Association and others interested, the Unemployment Compensation Commission was asked to explain the liability of privately owned hospitals under the Mississippi Unemployment Compensation Law. The following has been received from Honorable Leon L. Wheeless, Chairman of the Commission under date of October 1, 1936 and is explanatory:

MSSISSIPPI UNEMPLOYMENT COMPENSATION COMMISSION

Jackson, Miss.
October 1, 1936

Enclosed herewith is a memorandum opinion from Honorable John H. Holloman, General Counsel for the Unemployment Compensation Commission, on the subject of the liability of privately owned hospitals under the Mississippi Unemployment Compensation Law. This represents the official opinion of this Commission.

Sincerely yours,
(Signed) LEON L. WHEELESS, Chairman

MEMORANDUM OF OPINION

To: Mississippi Unemployment Compensation Commission.

From: John H. Holloman.

Subject: Hospitals—privately owned.

Ruling: Privately owned hospitals ordinarily are not excluded from the operation of the Unemployment Compensation Law.

Opinion: Privately owned hospitals are subject to the Mississippi Unemployment Compensation Law if they have in employment for some portion of a day in each of twenty different weeks within either the current or preceding calendar year eight or more individuals, unless such hospitals can be excluded under section 19(g)(8), as amended, of the Law.

Section 19(g)(8), as amended, excludes from the operation of the Law:

> "Service performed in the employ of a corporation, community chest, fund, or foundation, organized and operated exclusively for religious, charitable, scientific, literary, or educational purposes,—no part of the net earnings of which inures to the benefit of any private shareholder or individual."

For the purpose of the exclusion the nature of the service is immaterial; the statutory test is the character of the organization for which the service is performed. In all cases in order to establish its status under the statutory classification, the organization must meet two tests: (1) It must be organized and operated exclusively for one or more of the specified purposes; and (2) its net income must not inure in whole or in part to the benefit of private shareholders or individuals.

Ordinarily, privately owned hospitals are not organized and operated exclusively for charitable purposes. As a general rule they depend upon fees from their patients for their operating expenses. The mere fact that such a hospital may receive donations from the State or from other sources for the maintance of charity wards and treatment of charity patients is likewise immaterial. Ordinarily the net income of such hospitals inures in whole or in part, directly or indirectly to the benefit of private shareholders or individuals.

Ordinarily, therefore, such hospitals do not meet the two tests above delineated, and consequently do not come within the exemption.

As a general proposition all privately owned hospitals are subject to the Mississippi Unemployment Compensation Law.

REPRINTS

Receipt of the following reprints is gratefully acknowledged:

The Progress Made In Hospitilization In Mississippi for the Year 1935-36.—H. A. Gamble, M.D., Greenville.

Recent Developments in Cancer Research. A Review of Literature.—Dr. J. A. Beals, Greenville.

Transurethral Resection of the Prostate.—Dr. Paul G. Gamble, Greenville.

Cancer of the Oral Cavity: A Review of Recent Literature With Special Reference to Radiation Therapy.—J. A. Beals, M.D., Greenville.

Cancer of the Lip: A Review of Recent Literature, With Special Reference to Radiation Therapy.—Dr. J. A. Beals, Greenville.

The Open Treatment of Peritonitis Secondary to Appendicitis.—Dr. H. A. Gamble, Greenville.

Hypoplastic Kidney.—P. G. Gamble, M.D., Grenville.

ASSOCIATION
DR. ROWLAND W. HALL
announces his association with
DR. JAMES GRANT THOMPSON
in the practice of
Dermatology and Syphilology
with offices in the
STANDARD LIFE BUILDING
Jackson, Mississippi

DELTA MEDICAL SOCIETY

The twenty-fourth semi-annual meeting of the Delta Medical Society was held at the courthouse, Belzoni, Wednesday, October 14, at 2:00 p. m. The program as announced by the secretary, Dr. F. M. Acree, was as follows:

Business Session:

2:00 p. m. Meeting called to order by President.

Invocation—Dr. J. Crudup.

Announcements.

Order of Business.

Scientific Session:

Paper—"Common Colds and Their Treatment."—by Dr. B. H. Booth, Drew.

Paper—"The Traumatic Chest"—by Dr. Wesley Hall, Shelby.

Paper—"Why the Idea That Sinus Surgery is Inefficient?"—by Dr. D. C. Montgomery, Greenville.

Paper—"The Conquest of America's Scourge—A Challenge to the Medical Profession"—by Dr. R. M. Adams, Ripley.

Paper—"The Physician"—by Dr. George Baskervill, Greenwood.

Paper—"Gonorrhea"—by Dr. J. W. Jackson, Belzoni.

Paper—"Gonorrheal Epididymitis and Its Treatment"—by Dr. H. King Wade, Hot Springs, Ark.

Social Session:

Banquet—Women's Club, 7:30 p. m.

ISSAQUENA-SHARKEY-WARREN COUNTIES MEDICAL SOCIETY

A regular monthly meeting of the Issaquena-Sharkey-Warren Counties Medical Society was held Tuesday, Oct. 13 at the Mississippi State Charity Hospital. After a supper served at 7:30 p. m., the meeting was called to order by the vice-president, Dr. G. C. Jarratt, with nineteen members and six guests present.

PAPERS AND DISCUSSIONS

(Dr. P. S. Herring, Program Chairman)

1. Carcinoma of the Cervix and Radium Irradiation.—Dr. M. L. Flynt, Meridian, Exchange Essayist from the East Mississippi Medical Society (Read by Dr. P. S. Herring in the absence of Dr. Flynt, due to illness. Discussed by Drs. G. M. Street, W. H. Parsons, and M. E. Lapham.
2. Roentgen Therapy in Breast and Pelvic Malignancies.—Dr. Karl O. Stingily, Meridian. Discussed by Drs. R. A. Street, Jr. and G. M. Street Dr. Stingily closed.
3. Diagnosis of Urologic Conditions.—A Motion Picture, Courtesy of the Winthrop Chemical Company. Presented by Dr. Walter E. Johnston.
4. Case Report from the Mississippi State Charity Hospital.—Intussusception of the Colon.—Dr. R. Y. Bannister.

A report of the out-patient clinic, conducted by the Society at the Mississippi State Charity Hospital was presented as follows:

Month of August, patients	934
Daily Average	30
Patients, Clinic days	590
Daily Average	45
Month of September, patients	1,049
Daily Average	35
Patients, clinic days	856
Daily Average	47

Plans for the annual meeting on December 8 at Vicksburg were discussed. It was announced that speakers would include Dr. Waltman Walters, Mayo Clinic, on "Surgical Lesions of the Biliary Tract with Special Reference to Recent Studies in Obstructive Jaundice;" and Dr. J. M. Mason, Birmingham, on "Diverticulitis of the Ileum, With Case Reports and Discussion of the Probable Etiology."

Officers of the Mississippi State Medical Association and the Louisiana State Medical Society are being invited as special guests and a feature of the meeting will be a reunion of the past presidents of the Mississippi State Medical Association. An invitation is extended to all members of the Mississippi State Medical Association and the Louisiana State Medical Society.

The program calls for open house in the afternoon with planned visits to places of interest, a banquet at about seven o'clock, and the scientific session in the evening.

The next meeting of the society will be held Tuesday, November 10. The subject will be Public Health and the committee in charge consists of Drs. F. M. Smith, chairman; A. K. Barrier, W. H. Scudder, T. W. Huey. The program:

1. Laboratory Aids in the Diagnosis of Communicable Disease.—Dr. N. C. Knight, Clarksdale, Exchange Essayist from the Clarksdale and Six Counties Medical Society.
2. Non-Tuberculous Chest Conditions Simulating Tuberculosis.—Dr. William D. Hickerson, Sanatorium.
3. The Ethical Relations of the Family Physician and the County Health Officer in the Observance and Enforcement of State and Local Regulations Pertaining to Communicable Disease Control.—Dr. F. M. Smith, Vicksburg.

JOHN FORD BURNETT BENTON

Dr. John Ford Burnett Benton, age 67, died at his home at Valley Park, Sept. 29. He had been in ill health for some time.

Dr. Benton was born in Lawrence County, the son of William H. Benton and Mrs. Martie Jett Benton. He received his degree in medicine from Tulane University of Louisiana School of Medicine in 1907. He had practiced his profession in Valley Park since.

He was a member and past president of the Issaquena-Sharkey-Warren Counties Medical Society and a member of the Miss. State Medical Ass'n.; a Mason; president of the Board of Supervisors of Issaquena County; and surgeon at Valley Park for the Illionis Central System.

He is survived by his wife, Mrs. Annie R. Benton; two daughters, Mrs. D. J. Brock, Mount Oliver, and Mrs. F. F. Mangum, Natchez; one son J. B. Benton, Jr., and four brothers, E. J. Benton, G. L. Benton H. Benton and C. H. Benton all of San Diego, Texas.

Funeral services were at Vicksburg and interment at Port Gibson.

NORTH MISSISSIPPI MEDICAL SOCIETY

A regular quarterly meeting of the North Mississippi Medical Society and Five Extension Post-graduate Lectures In Pediatrics under the auspices of the Committee on Postgraduate Medical Education were held in the Graduate Building, University Campus, Oxford, Oct. 20 to 23. The joint program as announced by Dr. A. H. Little, secretary, was as follows:

Tuesday, Oct. 20, 7 p. m.: The Newborn.—Dr. Robert A. Strong, New Orleans, La.

Wednesday, Oct. 21: 10:30 a. m.: Invocation.—Reverend W. R. Lott, Pastor Methodist Church, Oxford.

10:40 a. m.: The Nutritional Requirements in Infancy.—Dr. Robert A. Strong.

11:30 a. m.: The Poliomyelitis Outlook for 1937.—Dr. W. A. Evans, Aberdeen.

1:45 p. m.: Treatment of Circulatory Failure.—Dr. Lyle Motley, Memphis, Tenn.

2:30 p. m.: Nutritional Diseases of Infancy and Childhood.—Dr. Robert A. Strong.

3:30 p. m.: Practical Points in Urologic Diagnosis.—(Motion Picture).—Dr. Thomas D. Moore, Memphis, Tenn.

Thursday, Oct. 22, 7 p. m.: The Immunizations.—Dr. Robert A. Strong.

Friday, Oct. 23, 7 p. m.: More Frequent Causes of Vomiting in Infancy (Motion Pictures and Slides)—Dr. Robert A. Strong.

CLAIBORNE COUNTY

DR. A. I. CHAPMAN

Dr. A. I. Chapman, Hermanville, died at the Veterans Hospital in Biloxi, Sept. 13, and was buried from the Baptist church in Hermanville Sept. 15.

Dr. Chapman had been in failing health for several years. However, he continued to practice until a few weeks prior to his death. He was a member of the Claiborne County Medical Society and at one time was vice-president of the State Association.

Dr. G. W. Acker, Port Gibson, recently left for New York, going by boat from New Orleans, where he will meet Mrs. Acker, then go to their summer home at Muskegon, Mich.

W. N. JENKINS, County Editor

Port Gibson,
Oct. 9, 1936.

DESOTO COUNTY

In the September issue of The Mississippi Doctor, I made mention of sons of doctors who are practicing with their fathers. In the Roster of Physicians in Mississippi for 1936, compiled by the Mississippi State Board of Health, I noticed physicians of the same name in the same county as—Drs. W. H. and H. M. Smith, Natchez; J. W. and S. L. Bailey, Kosciusko; J. D. Simmons, Gunnison, and J. F. Simmons, Skene; J. R. and R. E. Priest, Houston; D. T. and W. W. Allred, Collins; S. E. and J. J. Bethea, Hattiesburg; A. F. and Margaret Caraway, Gulfport; Elmer D., Emma Von G., and Fred Gay, Biloxi; C. A., E. E. and W. P. Sheely, Gulfport; Geo. W. and James E. Wallace, Biloxi; Frank Hagaman, Jackson, and R. L. Hagaman, Raymond; L. Q., R. W., and W. H. Hall, Jackson; Percy and R. P. Hudson, Utica; B. F. and J. R. Johnson, Jackson; R. B. and S. H. McLean, Jackson; G. T. and H. C. Sheffield, Jackson; B. N. and G. C. Walker, Jackson; J. R. and J. W. Jackson, Belzoni; E. S. and Eugene V. Bramlett, Oxford; W. Jeff and W. J. Anderson, Meridian. James and T. L. Bennett, Meridian; P. E. and W. R. Holladay, Meridian; J. P. and T. F. Conn, Monticello; L. O. and R. W. Carruth, Tupelo; J. T. Dabbs, Shannon, and R. G. Dabbs, Tupelo; H. Sale and J. L. Trice, Tupelo; T. B. and F. M. Holloman, LeFlore County, brothers; J. G. and J. S. Prine, Marion County; A. J. and E. D. Boozer, Monroe County; in the same county B. C. and G. T. Tubb; S. B. and V. L. Henton, Newton; R. G. and W. R. Hand, Philadelphia; J. E. and R. R. Wyatt, Noxubee County; W. M. and Wm. Otis Biggs, Osyka; J. E. and R. H. Brumfield, Pick County; also of same county, B. J., J. E. and T. E. Hewitt, M. D. and Gladys Ratcliff and Elise and L. J. Rutledge; J. A. and T. H. Rayburn, Pontotoc; R. B. and R. C. Cunningham, Booneville; H. B. and W. H. Sutherland, Booneville; J. P. and J. T. Walker, Quitman County; O. O. and R. B. Austin, Scott County; H. B. and H. S. Goodman, Sharkey County; Virginia and William D. Hickerson, C. E. and E. L. Walker, Sanatorium; A. C. and T. B. Harrison, Charleston; A. H. and H. A. Smith, Sumner; John C. and M. M. Powell, Coldwater; H. H. Austin, Bovina, and J. S. Austin, Oak Ridge, brothers; J. W. and W. P. Shackelford, Washington County; E. W. and G. H. Butler, Centreville; R. G. and S. E. Field, same place; L. T. and W. W. Parker, Winston County; George A. and Leonidas S. Brown, Water Valley, brothers; and Hugh L. and W. D. McCalip, Yazoo City. I do not know the exact relationship of all these named above.

Drs. H. A. and P. G. Gamble, Greenville, brothers; also H. L. and L. V. Rush, Meridian; R. B. and W. T. Harper, Fayette; T. J. and J. W. Barkley, Isola and Belzoni respectively; R. H. and W. S. Granford, Laurel and Ellisville respectively; Dr. C. D. Mitchell, Whitfield, is the father of Dr. C. B. Mitchell, State College. Dr. W. L. Little, Wesson, is the father of Dr. A. H. Little, Oxford; Drs. D. P., G. M. and A. Street, Vicksburg, are brothers; Dr. R. A. Street, Jr., Vicksburg, is a nephew of the above.

Some physicians have sons practicing in

other states as Dr. P. W. Rowland, Oxford, has a son, Whitman, in Memphis, Tenn.; Dr. W. B. Dickins, Greenwood, has a son in Monticello, Ark.; Dr. F. M. Sandifer, Greenwood, has a son in New Orleans, La. This list could be extended further.

Dr. Nicholas Gotten has removed to Memphis specializing in psychiatry and brain surgery. He and his twin brother, Dr. Henry Bragg Gotten, general medicine, have their offices at the Polyclinic. They graduated at the University of Tennessee, their hospital service was at Philadelphia General Hospital, Dr. H. B. Gotten locating in Memphis and Dr. Nicholas Gotten remaining in Philadelphia where he had hospital and institutional conections. They are well prepared for their chosen work and their success is pronounced. Dr. H. B. is an eligible bachelor while Dr. Nicholas has recently become a proud father. The Gottens at one time lived at Oxford.

Since writing the above, Dr. Henry Bragg Gotten has succumbed to the inevitable; he was happily married on the 16th of October to Miss Peggie Merritt, of Memphis, a lady of pulchritude and attainments. They are on a month's trip to California.

The Woman's Auxiliary is a valuable adjunct to our State Association and we expect it to grow in numbers and influence.

L. L. MINOR, County Editor

Route 4, Memphis, Tenn.,
Oct. 6, 1936.

HUMPHREYS COUNTY

Mr. and Mrs. Milton Branton, Houston, Texas, have been visiting her parents, Dr. and Mrs. G. S. Bryan, Silver City.

Mr. and Mrs. J. B. Barkley, Cotton Plant, have been visiting Dr. and Mrs. J. W. Barkley, Belzoni, and Dr. and Mrs. T. J. Barkley, Isola.

Mrs. John C. Bell, Belzoni, has recently returned from a visit with relatives in Colorado.

Spencer Barnes, son of Dr. and Mrs. G. N. Barnes, Belzoni, has returned to the University of Mississippi to begin his year as a sophomore premedical student.

Miss Demetra Buck has returned to Nashville, Tenn., after having spent the summer with her mother, Mrs. J. C. Higdon, Belzoni.

Dr. and Mrs. J. Robert Jackson, Belzoni, were visitors at Memphis recently.

Friends of Dr. J. C. Higdon, Belzoni, will regret to learn of the recent death of his sister.

Dr. and Mrs. W. S. Taylor, Isola, were recent visitors with relatives in Winona.

Dr. G. S. Bryan spent several days in Houston, Texas, during which time he went to the Texas Centennial Exposition.

Friends of Dr. and Mrs. J. W. Jackson, Belzoni, will be delighted to know that Mrs. Jackson is doing nicely after having undergone an operation at the King's Daughters Hospital, Greenville. Mrs. Jackson is especially appreciative of their remembrances.

Gordon Keith Rogers, Belzoni, has returned to L. S. U. School of Medicine where he will begin his studies as a senior medical student.

Mrs. T. J. Barkley, Isola, has had as a guest her sister, Mrs. Gladys Cruze.

Mrs. Gene Lewis, Belzoni, spent last week in Greenville with her sister, Mrs. J. W. Jackson, while the latter was a patient there.

Dr. J. C. Higdon was a visitor in Memphis recently.

JAMES W. JACKSON,
County Editor

Belzoni,
Sept. 29, 1936.

LEFLORE COUNTY

Dr. E. M. Murphy, Macon, visited his son in Itta Bena, Sept. 1.

Dr. J. C. Pegues, formerly of Greenville, has opened his office at 301 Howard Street. He will limit his practice to diseases of the eye, ear, nose, and throat.

Dr. S. L. Brister, Jr., visited Memphis Sept. 3.

Dr. L. A. Barnett, director of the Leflore County Health Department, and Mr. J. L. Lary, county supervisor of sanitation, have been awarded U. S Public Health scholarships at Vanderbilt, and will be away about three months. Dr. C. R. Gillespie, Decatur, Ga., will serve as director during Dr. Barnett's absence. He is a graduate of Emory University, Atlanta, and has been engaged in public health work in Gibbs County, Ga. Mr. M. A. Greer, Louisville, will serve as county supervisor of sanitation.

Drs. Tate Carl, Chandler, Holloway and Cole, all of Memphis, were guests in the home of Mr. and Mrs. A. S. Cary, Sept. 12.

At a called meeting of the staff of the Greenwood Leflore Hospital Sept. 14, Dr. W. D. Hickerson, State Sanatorium, made a report on the border line cases of tuberculosis in Leflore County, showing x-ray pictures of every case, and discussed each case.

Dr. and Mrs. L. B. Otken attended the National American Legion Convention at Cleveland, Ohio, Sept. 21-27.

Dr. and Mrs. T. M. Riddell, Swiftown, announce the engagement of their daughter, Katherine Maurine, to Mr. William S. Mullins, Macon and Metcalfe. The wedding will take place in the late fall.

Miss Mary Elizabeth Fatheree, Greenwood, has entered the Medical Department of the University of Tennessee, Memphis, to finish her course in the study of medicine.

At the regular staff meeting of the Greenwood Leflore Hospital, Thursday, Oct. 1, Dr. J. C. Adams was elected chief, Dr. W. B. Dickins, vice-president, Dr. I. B. Bright, secretary-treasurer.

W. B. DICKINS, County Editor

Greenwood,
Oct. 3, 1936.

PANOLA COUNTY

Panola is now very much on the map in a business way, with the dam project on Tallahatchie river and road construction jobs.

We see many new faces in Batesville and Sardis.

Our doctors seem to keep in a good humor and have not heard of any collapsing from over work. One said he was too busy to file a death certificate with the registrar which required only time enough to address an envelope, stamp and mail it.

Dr. S. T. McIlwain does not appear to be hurt by being separated from his appendix some weeks ago.

Dr. H. R. Elliot is still our doctor politician. If he had a real good political job his name might be found in the "little black book."

Dr. J. M. Anderson, Sardis, has been on the sick list. It looks like he might frighten most any ordinary disease with some of his deep voiced expletives.

Mrs. A. J. McIlwain and son have been visiting in Lula.

Dr. A. J. McIlwain has made several trips to Memphis on professional business.

Mrs. G. H. Wood is visiting her parents in Lansing, Michigan.

Miss Bess Wood spent the summer with aunt and her brother, Dr. Harden Wood, in Texas; also visited her brother, Dr. Spencer Wood, in New Orleans, but has returned and is now at the University.

Our efficient county health officer, Dr. Alexander, Como, has been kept busy looking after the health of the county and attending to a good practice.

Dr. D. W. Whitaker, Sardis, visited his home in Missouri some weeks ago.

G. H. WOOD, County Editor
Batesville, Oct. 2, 1936

SUNFLOWER COUNTY

DR. ROBERT M. DONALD

Dr. Robert M. Donald, 54, physician of Moorhead, died at the King's Daughters' Hospital in Greenville Sept. 10, after a prolonged illness.

A native of Baird, Sunflower County, he was graduated from the University of Tennessee Medical College at Memphis. After his graduation, Dr. Donald began practice in Sunflower County. He moved to Hattiesburg in 1904.

At the opening of the war he enlisted and was commissioned a major in the medical corps of the 320th Field Artillery. At the close of the war Dr. Donald resumed practice of medicine, moving from Hattiesburg to Moorhead.

He was formerly vice-president from Mississippi for the Mid-South Post-Graduate Medical Assembly and for two terms was president of the Delta Medical Society. He also served one term as secretary. Dr. Donald was at one time president of the Mississippi Rexall Clubs.

He leaves his widow, a son, W. D. Donald, and a daughter, Helen Donald, all of Moorhead.

Funeral services were held Sept. 11 from the home of Mrs. J. D. Donald in Hattiesburg.

Dr. R. M. Bostwick, Jr., Poplarville, is now practicing in Indianola.

Dr. and Mrs. H. B. Cottrell spent two weeks touring in California and Mexico.

Dr. W. E. Wiggins was visited at Parchman, and we were proud to see the improvements which have been made since he has been there.

We regret to learn that Dr. B. F. McNeal, of Moorhead, is ill.

H. B. COTTRELL, County Editor
Indianola, Oct. 6, 1936.

WARREN COUNTY

Dr. Leon S. Lippincott, our esteemed editor, was not "far from the gay cities and the ways of men" when he, as invited guest essayist, appeared before the South Mississippi Medical Society at Laurel at the September meeting.

Someone has said that some men make all countries where they come their own, so it is obvious on the above premises that Dr. Edley H. Jones, of Vicksburg, annexed New Orleans to our city by his recent visit there.

Dr. Tom Sparks has temporarily taken up the practice at Newellton, Louisiana, of Dr. Stafford who at present is taking a "leave of absence" from his work on account of his health. Just how long Tommie will be away from us we are not advised, but we wish him all the success in the Pelican State.

Waring Black, the four-year old son of Dr. and Mrs. Guy C. Jarratt, was unfortunate enough to fall from a moving car, driven by his mother, when the door of the car unexpectedly opened. It is hoped the injuries will not prove serious.

Jack, Jr., son of Dr. and Mrs. J. S. Ewing, left for the University of Virginia where he takes up his second year studies.

Sherrill Herring, at 11:30 a. m. Sept. 30, "As a living jewell dropped unstained from heaven" into the home and tender care of Dr. and Mrs. Preston Herring. "A daughter and a goodly babe, lusty and like to live" would say the Bard of Avon.

Perhaps Mavell had in mind Florence Nightingale when he wrote "who can foretell for what high cause this darling of the gods was born?"

Such thoughts ran through out mind when we witnessed the two beautiful graduation exercises held during the month of September, 1936, at the Holy Trinity Church of our city. One was for the graduating nurses from the Sanitarium the other for the graduating nurses from the Vicksburg Infirmary. Dr. Estornelle, rector of this church, spoke to each class, and into the profession of nursing was born this bevy of beautiful and accomplished graduate nurses, born we trust to dignify and glorify the calling of Florence Nightingale.

It seems that Dr. B. B. Martin, Sr., since Benson, Jr., has become actively associated with him at the Vicksburg Infirmary, finds more time to get away from professional duties and cares. This week we find him with a BIG HAT on in the Lone Star State, looking over the centennial sights in Dallas and Fort Worth.

We with regret last month reported Dr. I. C. Knox's loss of a brother. This month we regretfully chronicle the death of another brother. The professional friends of Doctor Knox feel keenly his misfortune and extend sincere sympathy.

Bulwer Lytton wrote "There is no man so friendless, but what he can find a friend sincere enough to tell him disagreeable truths." Well, our editor got some truths disagreeable or otherwise when he sent his request letter, card, or questionnaire to many of us inviting opinions, suggestions, or reactions relative to our Mississippi Doctor. As we stated, many were complimentary, some not so much; nevertheless, all in all, they should and will be helpful for it has been well said and truthfully said in these words:

"Dear is my friend—yet from my foe, as from
 my friend comes good,
My friend shows me what I can do, and my
 foe what I should."

The many friends of Dr. J. S. Ewing sympathize sincerely with him in the recent loss of his mother, whose death occurred in Natchez.

Ye County Editor writes with inexpressible emotion that stirs the inborn sensation of sorrow and regret when he chronicles the death of Doctor John Burnet Benton, of Valley Park, Issaquena County, which occurred Sept. 29.

Dr. Benton for many years was a member of the Issaquena-Sharkey-Warren Counties Medical Society, and served with distinction, only a few years ago, as its president.

Although sick for some while, the final day, the inevitable hour came, but he must have said as another so well spoke,

"I have lived and I run the course which Fortune allotted me; and now my shade shall Descend illustrious to its grave."

H. T. IMS, County Editor
Vicksburg, Oct. 9, 1936.

WINSTON COUNTY

Dr. E. Lovorn, of Fearn Spring neighborhood, was in the city this week.

Dr. W. W. Parks was in Jackson last week on business.

The most startling thing, is how any of our southern doctors can fail to back up President Roosevelt. (However we want no controversy).

We are hoping to have more interest stimulated among the doctors in our county and have some interesting medical meetings.

Dr. H. B. Wadkins, Noxapater, our county health officer, was in the city this week on health problems.

Winston County escaped the dreaded malady "infantile paralysis" and we hope the cool weather will cause it to subside throughout the country.

We have come to believe that more specific medication and less medicine will be given in the near future. Shot gun prescriptions in many instances are harmful.

M. L. MONTGOMERY,
Louisville, County Editor
Oct. 2, 1936.

HOSPITAL STAFF TRANSACTIONS

BRAMLETT HOSPITAL STAFF MEETING

The staff meeting of the Bramlett Hospital was opened at 8:30 p. m., October 1, in the offices of Dr. E. S. Bramlett at the hospital. Those present were: Dr. E. S. Bramlett; Dr. E. V. Bramlett; Dr. F. E. Linder; Dr. S. O. Price; Dr. P. W. Rowland; Dr. J. R. Sims; Dr. W. W. Phillips.

The meeting was called to order by the president, Dr. E. S. Bramlett.

The minutes of the September meeting were read by the secretary. Dr. E. V. Bramlett, and adopted by an unanimous vote—without correction.

Report of the record committee to date was approved.

Several case histories were read and discussed in a general way.

A number of x-ray pictures showing fractures of different types were exhibited and discussed.

There being no new business to be brought before the meeting, it was adjourned at 9:15 p. m.

E. V. BRAMLETT, Secretary.
Oxford, Oct. 12, 1936.

COAHOMA COUNTY MEDICAL SOCIETY and CLARKSDALE HOSPITAL STAFF MEETING

The Coahoma County Medical Society and the Clarksdale Hospital Staff were called to order in the Clarksdale Hospital, Oct. 14, 1:30 p. m., by the president, Dr .J. A. Slack. He ordered the minutes read which were approved as read.

Committee reports being the next order of business, Dr. J. L. Levy reported for the committee that was appointed at the last meeting to investigate the practicability of the Society having luncheon meetings instead of meeting at the hospital as heretofore. The report was discussed by all present and the general opinion favored the Society having luncheon meetings. Dr. Levy then made a motion which was seconded by Dr. Brandon, and carried, that the Society meet in the dining room of the Alcazar Hotel at 12 o'clock; the secretary to arrange the meeting with the manager of the hotel the day before each meeting; the secretary to call all local physicians by 'phone the morning of the day of the meeting and remind them to come; the day of the month of the meeting to remain the same. Dr. J. L. Levy then made a motion which was seconded by Dr. W. S. Slaughter, and carried, that the Society meet the third Wednesday in November instead of the second Wednesday, due to the conflict with Armistice Day.

The health officer, Dr. N. C. Knight, then announced that Dr. W. D. Hickerson would hold a Tuberculosis Diagnostic Clinic at Clarksdale the week beginning Nov. 9.

The secretary read an invitation from the New Orleans Graduate Medical Assembly to their meeting March 8, 9, 10, 11, 1937.

The scientific program being the next order of business, same was as follows:

"Poisonous Spider Bites.—Dr. J. A. Slack, Friars Point.

Dr. J. L. Levy then verbally presented a case report of a premature baby born Oct. 14. Same was discussed by all members present.

Dr. Wm. P. Warfield then volunteered to present a paper at our next meeting.

There being no further business the Society adjourned.

N. C. KNIGHT, Secretary
Clarksdale, Oct. 14, 1936.

POISONOUS SPIDER BITES

Dr. James A. Slack, M.D.
Friars Point

The black widow spider, the female Lactrodectus mactans, is found in practically every part of the United States.

The diagnosis of arachnidism, due to the bite of the Lactrodetuc mactans spider, is more easily made by having a history of having been bitten by a spider. There is usually little or no visible lesion at the site of the bite.

The pain usually starts immediately in the region of the bite, and spreads rapidly until most of the large groups of muscles of the body are involved. The pain is usually felt more intensely in the abdominal muscles The pain increases, reaching its maximum in about one hour after the bite, and is then evidently excruciating and agonizing. It is usually continuous, but is occasionally cramp-like or intermittent, and is manifested by writhing, doubling up, and screaming.

There is a good deal of muscle spasm, which is most notable in the muscles of the abdominal wall, which become hard and board-like.

Two of the cases I saw also complained of a "tightness" in the chest. Spasm of the calf muscles was constant in all the cases I saw, with a tendency to draw the legs up on the body. Local tenderness was absent.

There was a slight rise in temperature, a slow pulse, with profuse sweating, restlessness and anxiety, tossing about in agony.

Two of my cases had nasuea and vomiting, and one urinary retention.

Bites from these spiders could, to a great extent, be avoided if the general population was taught that these small, innocuous appearing creatures were really dangerous.

The characteristics of this species should be made known, and the peculiarities of the web popularized so that it might be easily recognized whenever seen. The web consists of straggly, coarse, uneven, viscous threads running in all directions in all three dimensions, with none of the geometrical exactitude which gives other webs their charm.

The poisonous Lactrodectus mactans may stretch her glossy, black legs as much as a two-inch spread. The under surface of her globular body, on her abdomen, usually shows a red patch, somewhat like an hour glass. Once seen, she should be easy to identify.

Methods of extermination must include destruction of the web and egg sacs, as well as the spiders themselves.

All four of the cases seen by me were bitten while seated on an outside toilet. This seems to be a favorite breeding place for them.

The control of pain in these cases is difficult. An ordinary dose of ¼ grain morphine had no effect. In one case it was necessary to give two hypodermic doses of ½ grain morphine each before the effect was noticeable. Other sedatives, including bromides, barbituric acid derivatives, and other coal tar compounds were given. Hydrotherapy, in the form of hot baths and hot compresses seemed to give some relief. With my last case I gave 10 c.c. of a 1-1500 hydrochloric acid solution intravenously. This case recovered much more quickly than the other three—whether from the hydrochloric acid, or not I cannot say.

In spite of its severe symptoms, spider bite poisoning, in a majority of cases, is self limited, and generally clears up spontaneously in two or three days. In my opinion adrenalin, strychnine, alcohol and other stimulants are contraindicated in the majority of cases, and could be better dispensed with. Similarly, local treatment such as caustic chemicals, treatment by incision, or even the actual cautery is practically always too late to do any good, since the venom is so rapidly absorbed that systemic symptoms begin almost instantaneously, and generally reach their maximum in about an hour after the bite. On the other hand, such treatment might open the way for infection, since the spider lives in filth and dirt, and the site of the bite is apt to be contaminated by germs. Since there is little or no local lesion, the simple application of some mild antiseptic is to be prefered.

VICKSBURG SANITARIUM

A regular monthly meeting of the staff of the Vicksburg Sanitarium was held Monday, Oct. 12 and after a supper served at 6:30 p. m. was called to order by the president, Dr. J. A. K. Birchett, Jr., with thirteen members of the staff and one guest present.

Reports from the records department and analysis of the work of the hospital were presented. A report of vital statistics for the month was given by Dr. F. Michael Smith, Director, Warren County Health Department.

Special case reports:

(1) Cholelithiasis Complicated by Carcinoma of the Gallbladder and Liver.—Dr. J. A. K. Birchett, Jr.

(2) Brucellosis.—Dr. L. J. Clark.

(3) Meningo-Vascular Syphilis.—Dr. R. A. Street, Jr.

Selected roentgen ray studies were demonstrated and discussed as follows: Tuberculosis of Hip Joint: Osteochondromatosis; Osteochondrosis of Navicular Bone (Tarsal Scaphoid) (Koehler's Disease); Pulmonary Tuberculosis (2 cases); Lung Abscess (2 cases); Cholelithiasis (3 cases); Duodenal Ulcer.

Three minute reports of the literature of the month:

Dr. Leon S. Lippincott.—Relation of Blood Cholesterol Level to Atherosclerosis.

Dr. S. W. Johnston.—Treatment of Migraine.

Dr. W. E. Johnston.—Plaster of Paris Cast for Holding the Foot in Extension Apparatus.

The next meeting of the staff will be held Wednesday, November 11, 1936.

ABSTRACT—BRUCELLOSIS

L. J. Clark, M.D.

Since January 1, 1936 the Laboratories have been making routine tests for undulant fever on all specimens of blood taken for the Wassermann tests. From January 1 to September 1 there have been 1,776 tests for undulant fever. Eighteen tests were positive in a titre of 1-500 or more, a percentage of slightly more than one. Forty-two other specimens showed agglutination in titre of 1-25 to 1-250.

Of the 18 patients showing agglutinations in the titre of 1-500 or stronger, five were presenting no symptoms. Explanation is difficult. It is possible that these patients had recovered from mild attacks of brucellosis without diagnostic symptoms. We are not sure that an individual presenting a very strong natural immunity may not give a positive agglutination test. There may be other factors to account for the agglutination. None of these five cases had agglutination in titre above 1-500. Their histories have been carefully investigated. In the 42 other cases showing agglutination in titre lower than 1-500 information obtained has failed to reveal any positive signs or symptoms of brucellosis at the time the blood specimen was taken. Follow up investigations have not been made as yet, but a few of these patients who have been seen have had no symptoms.

Vaccine therapy was used in seven of the cases with agglutination of 1-500 or stronger and at present complete cure is indicated in all cases after treatment varying in duration from four to twelve weeks. The treatment is rather drastic and sloughing and abscess formation may occur if the vaccine is not properly injected into the muscle. The vaccine used was prepared by Jensen-Salbery Laboratories, Inc., Kansas City, Mo., and contained Brucella abortus (bovine) 50 per cent; Brucella suis (porcine) 50 per cent; six billion killed organisms per c.c.

One case that came into my care after about three months of treatment by another physician by whom he had been given various other vaccines with no satisfactory results, was not given vaccine by me. He is the only patient now that has not shown satisfactory progress although he is better.

As to the manner of infection, most of these cases were traced to milk from infected cattle. One patient was himself a dairyman producing substandard milk. One case apparently came from buttermilk, from an infected cow. The majority apparently came from privately owned milch cows' milk.

MENINGO-VASCULAR SYPHILIS

R. A. Street, Jr., M.D.

PATIENT.—Colored, male, age 41, married, brickmason; admitted to Sanitarium Sept. 3, 1936.

CHIEF COMPLAINT.—Severe pain in region of cervical spine, extending up into occipital region.

HISTORY OF PRESENT ILLNESS.—Has had pain for five or ten days. At first pain was not very severe and general condition was good with no other symptoms except slight nausea at times. For the past few days pain has become severe, there is considerable nausea, some vomiting, fever and mental stupor, and nourishment has not been retained. No respiratory symptoms; urinary system not remarkable; bowels fairly regular: no remarkable loss of weight. Patient has been given neoarsphenamine and bismuth twice during the past month by a local doctor. History of a primary syphilitic lesion 15 years ago, present for three weeks; no glands noted in the inguinal region. No rash or sore throat since; no antisyphilitic treatment was given at that time.

FAMILY HISTORY.—Not remarkable.

PHYSICAL EXAMINATION.—Well developed, poorly nourished, stuporous, does not respond to questions. Temperature 98°F.; pulse 64; blood pressure 100/60; respiration 16. Pupils equal and regular; react to light and accommodation. Apex beat slow and regular; no murmurs. Lungs clear; abdomen not remarkable; knee jerks and ankle jerks much diminished on both sides. Flexion of head rouses somewhat and complains as if suffering from extreme pain. No Babinski sign present. Scar on corona.

CLINICAL LABORATORY. — Spinal fluid: bloody and under increased pressure; cell count 142; differential cell count 55 per cent polymorphonuclears, 45 per cent mononuclears; Wassermann negative.

BLOOD: Eline and Young tests positive (++); Wassermann, Kahn and Eagle flocculation tests negative. Erythrocyte count, leukocyte count, differential leukocyte count not remarkable. No malaria found.

URINE: Twelve per cent of albumin (by volume); rare hyaline and coarsely granular casts.

TREATMENT.—500 c.c. of 10 per cent glucose solution intravenously, at once. Patient seemed to rouse somewhat after spinal puncture and retained some liquid nourishment; complained of severe headache and backache.

The next day 500 c.c. of 10 per cent glucose solution were again given and 2 drachms of mixed treatment three times a day was started. Retained more nourishment but continued to complain of severe headache and backache and still stuporous.

Sept. 6: Spinal tap repeated. Fluid still bloody but less so than on first puncture. Glucose again given with 10 grains of calcium in the solution. General condition of patient seemed better after second spinal puncture and nourishment was retained well.

Sept. 10: Given 0.06 gram mepharsen in vein and one ampoule of bismocymol in buttocks. Continued to improve rapidly. Temperature lower but still febrile. Stupor had cleared considerably but not mentally clear yet.

Spinal Fluid: Wassermann test positive (+), acetone insoluble lipoid antigen, (++) with two cholesterinized antigens; Kline and Young test positive (+++). Lange's colloidal gold test showed slight reduction not suggestive of any definite condition. Cell count 49; proportion of polymorphonuclears and mononuclears about the same as before.

Sept. 13: Had continued to improve and temperature normal.

Sept. 15: Discharged from hospital feeling very much better and not complaining of headache or pain in the cervical region except at rare intervals. Mental state had cleared considerably. Given mepharsen and bismocymol and instructed to report to his local physican for further weekly treatments of arsphenamine and bismuth or mercury.

NOTE.—This case is interesting from the point of view of the cerebral-spinal findings. According to most neurologists the outlook is better in the meningo-vascular type than in other forms of syphilis of the central nervous system.

WATER VALLEY HOSPITAL STAFF MEETING

A regular monthly staff meeting of the Water Valley Hospital was held at the hospital, Thursday, Oct. 15, at 7:30 p. m. The program included:

1. Business meeting: Minutes.
2. The Charity Patient and the State Hospital Commission.—Dr. L. S. Brown.
3. Congenital Syphilis, Poliomyelitis and Meningitis.—Dr. D. C. French.
4. Duodenal Drainage, Report of a Case of Supurative Cholangitis.—Dr. George A. Brown.
5. Demonstration of Some Interesting Roentgen Ray Studies.
6. Luncheon.
7. Adjournment.

Staff meetings will be held at the Water Valley Hospital each month on the third Thursday. Program will be mailed out. All are cordially invited to attend and take part in the discussions.

HONOR ROLL

The following have contributed to the Association section of our journal this month:

COUNTY EDITORS: Claiborne—W. N. Jenkins; DeSoto—L. L. Minor; Humphreys—James W. Jackson; Leflore—W. B. Dickins; Panola—G. H. Wood; Sunflower—H. B. Cottrell; Warren—H. T. Ims; Winston—M. L. Montgomery. —8.

SOCIETIES: Coahoma County, N. C. Knight; Delta, F. M. Acree; Issaquena-Sharkey-Warren Counties; North Mississippi, A. H. Little. —4.

HOSPITALS: Bramlett Hospital, E. V. Bramlett; Clarksdale Hospital, N. C. Knight; Vicksburg Sanitarium; Water Valley Hospital.—4.

OTHERS: H. G. Cook, Felix J. Underwood, Rowland W. Hall, Harvey F. Garrison.—4.

GRAND TOTAL: 20.

Your Editors Thanks You.

WOMAN'S AUXILIARY
TO THE
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Our national Press and Publicity Chairman, Mrs. J. P. Simonds, of 25 East Walton Place, Chicago, Ill., urges every auxiliary to subscribe for the National News Letter. The price is only one dollar per year, and every auxiliary needs it to keep up with activities in other states, for suggestions and all in all, a closer relationship with other auxiliaries over the country. We think it would be a very nice courtesy if every auxiliary in the state agrees to give a subscription to the National News Letter to each president. Take this up at your next meeting and have the dollar sent to Mrs. Simonds at once.

We need more news. Send in the notices of your meetings. We all feel interested in what the rest of us are doing.

CENTRAL MEDICAL AUXILIARY

The regular monthly luncheon meeting of the Woman's Auxiliary to the Central Medical Society was held at the Edwards hotel on Tuesday at 12 o'clock.

The long tables, arranged in U shape, featured decorations of autumn flowers in shades of yellow and gold. The centerpiece at the head table was an arrangement of Mexican tithonia and baby breath and bowls of golden cosmos were placed on the ends of the tables.

Mrs. Temple Ainsworth, president, presided and Mrs. W. F. Hand, Mrs. Fred Hollowell, and Mrs. Harvey Garrison were hostesses. The following members and guests were present:

Mesdames J. W. Lipscomb, T. E. Wilson, A. G. Wilde, Jr., A. G. Wilde, Sr., F. J. Underwood, O. F. Carr, I. C. Higgins, J. A. Milne, H. F. Garrison, Jr., H. F. Garrison, Sr., J. B. Howell of Canton, F. D. Hollowell, W. F. Hand, H. C. Ricks, C. F. McKenzie, H. C. Sheffield, Temple Aainsworth, F. L. Van Alstine, F. E. Rehfeldt, N. C. Womack, and Lauch Hughes.

HOMOCHITTO VALLEY MEDICAL SOCIETY AND AUXILIARY

A very jolly feature of the evening of Thursday was the entertainment of the members of the Homochitto Valley Medical Society and the Woman's Auxiliary to the Society, with Dr. James C. Rice as host.

Dr. Rice entertained a large gathering of members at his attractive cottage on Lake St. John at a seated supper. A variety of games and "story telling," was arranged to amuse the guests throughout the hours preceding the supper.

The entertainment was carried out in much clever and unique detail creating worlds of merriment through the afternoon and early evening.

A large gathering of doctors and their wives motored in parties to Lake St. John to attend.

Natchez MRS. E. E. BENOIST

ISSAQUENA-SHARKEY-WARREN COUNTY WOMAN'S AUXILIARY

The Woman's Auxiliary of the Issaquena-Sharkey-Warren County Medical Society held its regular monthly meeting at the Hotel Vicksburg, presided over by its very efficient president, Mrs. Charles Edwards. It was well attended and enjoyed by all.

Dr. and Mrs. B. B. Martin Sr. have returned from a delightful two weeks' vacation in Mexico City.

This is proving a popular place to spend a vacation. Dr. and Mrs. George Street recently returned.

Dr. and Mrs. B. B. Martin Jr., were recent visitors to the fair in Dallas and report a delightful time.

Congratulations are extended to Dr. and Mrs. Preston Herring on the birth of a beautiful little daughter.

Dr. and Mrs. Edley Jones were recent visitors in New Orleans.

Mrs. Edley Jones and son Edley Jr., spent the week in Canton, Miss., visiting Mrs. Jones' mother, Mrs. Jiggetts.

Mrs. Jack Birchett was a recent visitor to the Dallas Centennial.

Mrs. Richard Street and little daughter were recent visitors to her parents, Mr. and Mrs. Noble in Fayette, Miss.

Much sympathy is extended to Mrs. Preston Herring in the loss of her father, Dr. J. C. Greenoe who died suddenly in Trenton, Mo., where he had charge of the Baptist church of that city. Rev. Mr. Greenoe was located in Vicksburg for a number of years.

Dr. and Mrs. W. H. Parsons were recent visitors to New Orleans.

Miss Polly Street, daughter of Dr. and Mrs. George Street, left for Roanoke, Va., to enter Hollins.

Mr. Jack Ewing, son of Dr. and Mrs. J. S. Ewing, left for Charlotteville, where he is a student at the University of Virginia.

Mr. Charles Edwards, son of Dr. and Mrs. Charles Edwards, entered Tulane as a first year medical student.

-- COURTESY CARDS --

DR. SEALE HARRIS
Gastro-intestinal and Nutritional Diseases
Diagnostician
2234 Highland Avenue
Birmingham, Ala.

WADE CLINIC
Wade Building
Hot Springs National Park, Arkansas
H. KING WADE, M.D., Urology
CHARLES S. MOSS, M.D., General Surgery
J. O. BOYDSTONE, M.D., General Medicine
JACK ELLIS, M.D., General Medicine
FRANK M. ADAMS, M.D., General Medicine
N. B. BURCH, M.D., Eye, Ear, Nose & Throat
RAYMOND C. TURK, D.D.S., Dental Surgery
A. W. SCHEER, X-Ray Technician
ETTA WADE, Clinical Pathology
MARY ALICE PHILLIPS Clinical Pathology
MARJORIE WADE, Bacteriology

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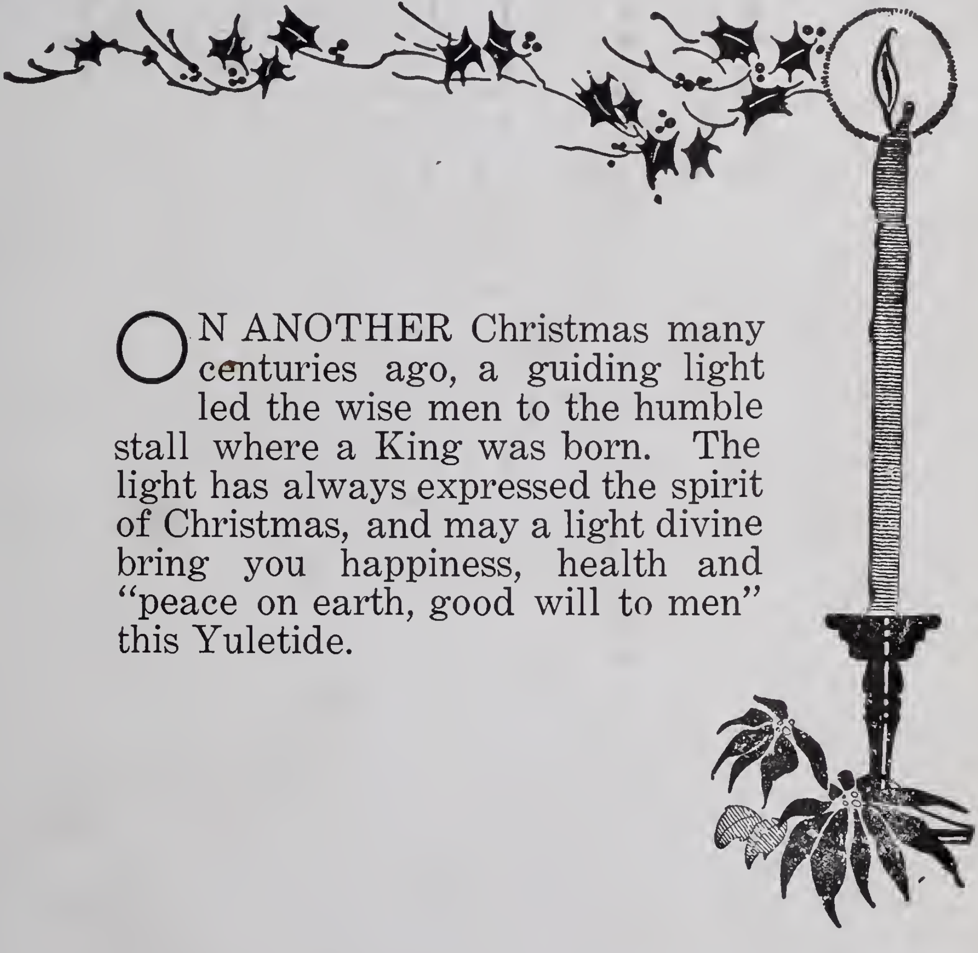

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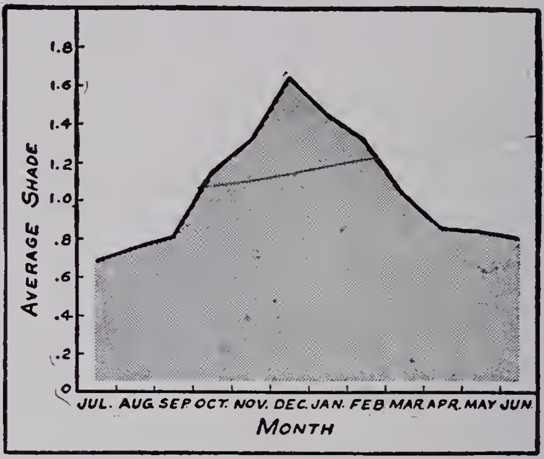

Average atmospheric pollution in 10 large American cities, 1931-1933. It is probable that conditions are similar in many smaller cities especially where soft coal is used and wind velocity is low.

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You've often heard people say, "I must go on a diet". . . or . . ."I must go in for some strenuous exercise and work this fat off." But either course may be dangerous. Unwise dieting frequently substitutes, for the evil of obesity, the evil of undernourishment. Strenuous exercise obviously adds to the burden on an already overburdened heart.

There is only one sane thing for any overweight person to do. That is to see his doctor. Your doctor can determine whether obesity is caused by some fundamental physical disorder—such as glandular derangements—or whether it is the result of unwise eating combined with insufficient exercise.

Diet is a form of treatment; and it should *never* be prescribed by anyone but a physician. The doctor's knowledge is necessary in determining what foods, and how much, may be eaten—what diet will be safe and pleasant, yet effective, in removing unneeded, unsightly fat.

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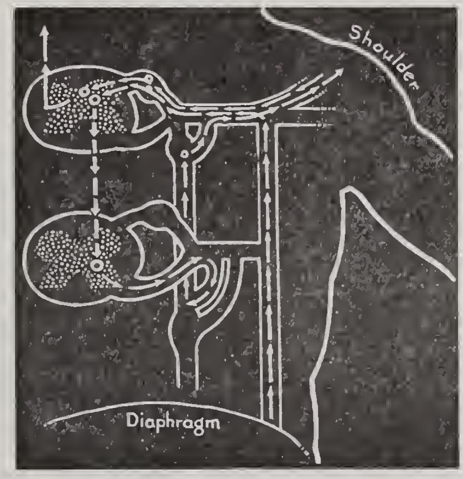

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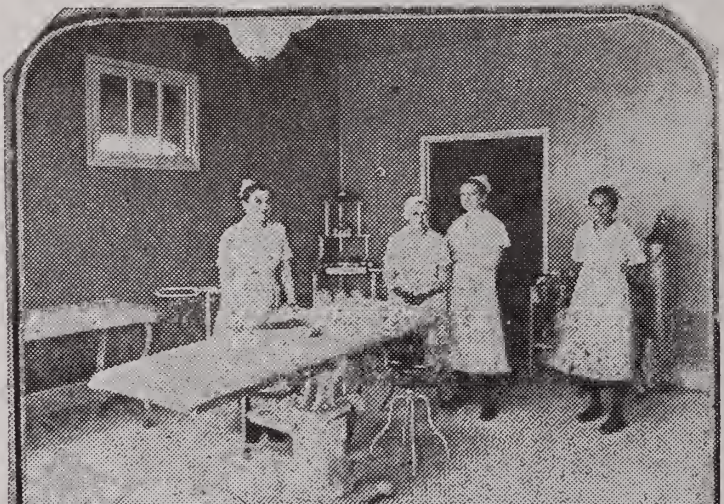

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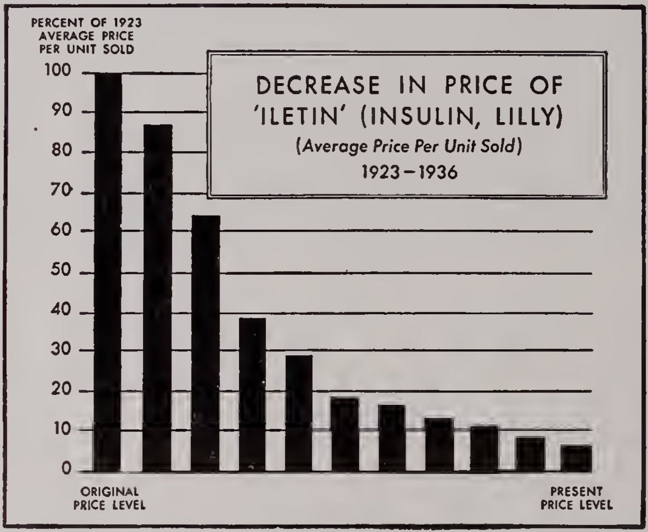

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KENNETH D. BLACKFAN, M.D.
Boston, Mass.

IN THIS consideration of anemia it is necessary first to discuss the features concerned in the normal physiology of the blood and blood-forming organs in the infant and young child, inasmuch as they differ so materially from the adult. There is, in the growing child, a more widespread distribution of the blood-forming tissues; a variation in the number and in the types of the formed elements; and an unusual response of the hematopoietic system to differing stimuli.

As to cell production, it may be stated that in the embryo the blood cells arise in mesodermal tissue all over the body. Later on the 60 mm. embryo localized areas of cell production spring up in the liver, spleen, the lymph nodes, the kidneys and in the medullary tissues of the bones. In late foetal life a transition takes place and the areas involved in the production of blood become localized in the bone marrow, with the findings of relatively few blood-forming centers in the liver, the spleen, and the lymph nodes.

In the continuation of growth, further localization of the blood-forming areas occurs, but without diminution of the total production so that in adult life the only tissues involved are in the ends of the long bones and certain cancellous bones.

With respect to the types of the predominating cells, it is obvious that in early embryonic life an immature type of cell is most common; in infancy, mature types of cells are formed but the centers of blood formation contain more immature than mature cells so that with any abnormal stimuli using up the mature cells, young cells are given off and promptly appear in the circulation.

Still another important feature is the normal variation in number and types of cells at the different age levels. To fix the normal level at five million cells per c.mm. and the hemoglobin at one hundred per cent is a very rough estimate indeed. For this reason, if the blood findings are not corrected for the age of the child, an erroneous diagnosis might be made. For example, a young child of six months with a hemoglobin of twelve grams, or seventy-five per cent, might be considered anemic whereas, actually, these are the average values for the age; and, on the other hand, with an accentuation of the normal lymphocytes for the age, a young child might be accused of having leukemia.

Here it is well to recall again certain facts: First, that the response of the hematopoietic system to a specific demand for increased function is directly related to the physiological activity, according to the age of the individual, and to the intensity and duration of the stimulus. In the infant, the need for the formation of more blood results in a rapid appearance of the fetal form of hematopoietic activity. As evidence of this change, the lymph nodes, the spleen and the liver become demonstrably enlarged much more rapidly than in adults under the same conditions.

Secondly, stimulation of hematopoietic activity by increased oxygen want, as occurs with anemia, infection or other agents, results in a rapid reversal of the proportion of mature to immature forms in the hematopoietic centers and in the ready appearance of the younger cells in the peripheral blood. Likewise, the limited reserve both of mature cells and of total hematopoietic tissue in the child will result in the development of anemia as the result of a drain upon the blood-building system in a progressively shorter period.

For want of accurate information it is impossible at the present time to classify anemia in infancy and childhood on an etiologic or pathologic basis. From a practical viewpoint it has been found satisfactory to consider the types of anemia in this age group on a sta-

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*Read before the 52nd annual meeting of the Mid-South Post Graduate Medical Assembly, Memphis, Tenn., Feb. 11-14, 1936 tistical basis according to their frequency of occurrence. Recently, in an analysis of several thousand patients, my associate and I found that with anemia as the presenting sign, 85% of the patients were found to be suffering from infection, failure to receive or properly utilize iron or other hemoglobin-forming substances, or a combination of these two factors. Next in order of frequency were the anemia believed to be congenital in origin and the anemia associated with premature birth. The hemorrhagic disturbances of the blood with which anemia is associated were relatively rare.

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*I have drawn freely upon published sources for this brief resume; because of limitation of time I shall not attempt to refer to personal publications or to make special acknowledgement of authorities to whom I am indebted.

This classification serves as a useful working basis since it permits a correlation between the history and physical findings and the known facts regarding the hematological and pathological findings. It offers the further advantage of always directing attention first to the most common diseases and last to the least common ones, thereby leading to less frequent errors in diagnosis.

This afternoon, we shall consider anemia resulting from infection, dietary deficiency, and prematurity, together with erythroblastosis foetalis and erythroblastic or Cooley's anemia. Finally, we shall point out certain principles in the symptomatic treatment of anemia.

Anemia associated with leukemia and other forms of lymphoblastoma, purpura hemorrhagica, hemolytic jaundice, and sickle cell anemia require no special consideration here. The diagnosis and treatment are the same in early as in later life.

Let us consider first anemia due to infection: Infection may produce a wide variety of simple and complicated blood states, thus mimicking almost any of the recognized types of anemia. Three types of anemia are not uncommon. They are the hemolytic type, the aplastic type and the purpuric type. They may occur singly or in combination. The following examples are illustrative.

Case 1: Purpuric and Hemolytic Types of Anemia (Secondary to Infection).

This fifteen-months'-old female infant was admitted to the hospital because of recurrent petechiae, bleeding from the mucous membranes and feverishness of two weeks' duration.

Physical examination revealed an acutely ill infant with numerous petechial hemorrhages in the skin and the mucous membranes, pallor, a reddened throat and otitis media. The liver, spleen, and lymph nodes were enlarged. The laboratory data included: red blood cells 2,500,000 per c. mm., hemoglobin 8.1 grams per 100 c. c. of blood, or 48 per cent, white blood cells 21,000 per c. mm., platelets 70,000 per c. mm. There were many immature red and white blood cells.

Shortly after entry a bilateral myringotomy was done, with resulting exudation of pus and blood. The anemia became much more severe in the following week. Free bleeding from the nasopharynx and middle ears occured and icterus was noted in the sclerae and skin. The blood serum showed a hyperbilirubinemia. Following bilateral mastoidectomy with the removal of necrotic mastoid cells and drainage of pus, the patient made a rapid recovery, the hemolytic and purpuric manifestations disappearing and the blood levels returning to normal.

Case 2: Aplastic Type of Anemia (Secondary to Infection)

This eighteen-months-old male infant was admitted because of pallor and frequent attacks of diarrhea of one month's duration. At entry, physical examination revealed a very pale, sick-looking infant with enlarged lymph-nodes throughout the body, a rapid heart with a slight systolic murmur, a large firm spleen and a palpable liver. The urine contained many white blood cells and the stools showed mucus, pus and blood. The red blood cells numbered 3,100,000 per c. mm.; the hemoglobin concentration was 9.3 grams per 100 c. c. of blood, or 55 per cent; the white blood cells were 13,000 per c. mm., and there were 1 per cent reticulocytes. The platelets were normal in number.

Liver extract first alone, and then with the addition of iron, failed to correct the anemia. After Shiga bacilli were recovered from the stools and the urine, specific improvement. A repetition of the liver extract and iron therapy after recovery from the dysentery was followed by a rise in reticulocytes to 19 per cent on the eighth day and a subsequent return in blood levels to normal.

In any instance of anemia dependent upon or secondary to an infection agent it would seem logical to expect no improvement from specific therapy for the anemia as long as the underlying process is present and active.

In the prematurely born infant, in contrast to the infant born at term, the diminution in the number of erythrocytes and the concentration of hemoglobin occurs at a faster rate during the first three months. In a sense this is a "physiological anemia" in that it occurs in every premature infant under five pounds at birth. It is invariable in that it reaches its greatest depth at about twelve weeks.

Nothing we have tried, other than transfusion, and this is beneficial only temporarily, effects this fall in blood during the first three months. Throughout this time, the infant gains satisfactorily. After the twelfth week, there is spontaneous improvement which continues if nothing interferes until the infant reaches the same level as the full-term child, at about six or seven months. That is, the erythrocytes level rises steadily, but the hemoglobin level tends to lag. If infection or poor appetite or inadequate diet interfere with the growth or gain of the premature, the anemia may fail to improve and be prolonged into the second half of the first year, or even the second year of life.

Dietary anemia is the term used to describe a condition resulting from an inadequacy in the diet of either food or mineral elements essential for the proper formation of blood cells. The development of anemia when the diet is well balanced suggests a failure to utilize or absorb the substances necessary for blood formation. The most common and most readily correctable form of this disturbance results specifically from a lack of iron in the diet. This state may occur in the child who has constantly refused to partake of or has failed to retain or has not been offered iron-containing foods over a long period of time.

The course and treatment of an infant with dietary anemia as cited:

An eighteen-months-old infant was admitted because of anorexia of one year's duration. The child's diet had consisted of milk and cereals only, for one year past. Physical examination revealed a pale infant. The heart was enlarged and there was a loud systolic murmur. The superficial lymph nodes were not enlarged but the liver and spleen were palpable. There were 3,400,000 red blood cells per c.mm.; the hemoglobin was 4.7 grams, or 28 per cent. There were 6000 white blood cells per c.mm. Less than 1 per cent reticulocytes were present.

During the first fortnight the infant received milk, cereal and orange juice. This excited no change in the peripheral blood. During the second fortnight, ultraviolet light radiation was given. This also occasioned no increase in the red blood cells, reticulocytes or hemoglobin percentage. Following this, iron ammonium citrate was administered. Sixty grains(4gm.) were given in orange juice each day. The diet was not altered. On the eighth day the reticulocytes rose to 10 per cent and the number of red blood cells and the amount of hemoglobin increased appreciably. On the tenth day after beginning iron therapy the appetite improved. Subsequently, with the continuation of erythrogenesis, a liberal diet was taken willingly. Four months after entry to the hospital the patient's color was excellent, the spleen and liver were no longer palpable and the heart murmur had disappeared.

Another important form of specific "iron deficiency anemia" may result in infants who have been deprived of the opportunity to store iron adequately during intra-uterine life because of anemia due to inadequate dietary intake on the part of the mother during the period of gestation. This deficiency in the storage of iron is not reflected in the blood of the infant at birth. It becomes evident in the neonatal period when the iron content of the diet is low and the infant is dependent on its food for maintaining a proper level of hemoglobin. Visible pallor is noticed generally between the third and sixth months of life, that is, much earlier than the usual dietary of "milk" anemia. If iron or iron-containing food is not supplied by the sixth month, anemia may become very severe and may continue well into the second year.

We come next to the congenital types of anemia. Let us first consider erythroblastasis foetalis. This is the term used to describe a disturbance in the production and the destruction of red blood cells, the manifestations of which make their appearance at the time of birth or shortly thereafter. This clinical entity has been described hitherto under several titles according to certain presenting clinical features: universal oedemia of the foetus or congenital hydrops; icterus gravis neonatorum; congenital anemia of the newborn.

In each of these separately reported clinical entities there may be found a varying degree of either oedema, icterus or anemia, singly or in combination, and also the presence of enlargement of the liver and the spleen. The chief diagnostic criterion is the finding of an abnormal number of immature red blood cells in the peripheral blood. There may be as many as 10-100,000 nucleated red cells per c.mm. Active hemolysis is also present.

Anemia, as indicated above, is always present but may be masked by the edema or the intense icterus accompanying the severe stages of the disease. The underlying histological state is the widespread distribution and extraordinary degree of extra-medullary hematopoiesis found in the liver, spleen, kidneys, as well as other organs. Hemosiderosis likewise is distributed throughout all tissues of the body. The disease begins in intra-uterine life. It is a familial disease. It may occur in the first born, but subsequent births may result in infants presenting evidences of the disease. It is more common to find it occuring with more severity in succeeding pregnancies. The experience of one family is cited:

Family A: The first four children were normal. The fifth child became pale in the first week of life and died of anemia without treatment during the third week. The sixth, seventh and eight pregnancies resulted in infants who successively exhibited severe degrees of erythroblastosis foetalis but, with treatment, recovered. The ninth infant at birth showed edema, jaundice, and petechial hemorrhages. Despite immediate treatment, death occured within twelve hours.

Since the most severe degrees of anemia develop rapidly in the early stages, transfusion is indicated as soon as the condition is recognized. For the obstetricians here is an opportunity; for the presence of an orange-stained amniotic fluid, yellow vernix caseosa, and an enlarged placenta at the time of delivery may be the earliest signs of the disease.

Mediterranean anemia, erythroblastic anemia, and Cooley's anemia are terms applied to a clinical entity in young children of Greek, Italian or Syrian parentage. The outstanding features are progressive anemia characterized by excessive numbers of nucleated red blood cells and a leukocytosis of varying degree. There is always associated an enlargment of the liver, spleen and lymph nodes, excessive hemolysis, and distinctive roentgenological changes in the bones. The earliest manifestations of the disease are pallor and enlargment of the abdomen with an associated anemia. Many of the patients become listless and inactive. As the anemia progresses, the spleen and the liver enlarge and hypertrophy and dilatation of the heart occur. Dyspnea on exertion is common. These patients are usually retarded in growth and development after the first year of life. The mucous membranes are pale and may present an icteric tinge. A typical mongoloid facies is characteristic of the disease, and when once seen a diagnosis can be tentatively made from the appearance alone.

Roentgenological studies reveal changes in the bones which vary only in degree. There is an extraordinary degree of hyperplasia of the bone marrow in all of the bones of the body. The medullary trabeculations become very prominent, the cortex becomes thinned as a result of the increased hyperplasia. There is a widening of the flat bones of the skull, a thinning of the tables and increased porosity. The medullary portion is greatly thickened and in the x-ray the appearance of the skull has been likened to that of "hair standing on end."

With regard to the blood, the anemia is moderate in degree with some two to four million red blood cells per cubic millimeter and a low color index. Leukocytosis is a constant finding, the white blood cells varying between fifteen and twenty-five thousand per cubic millimeter. The stained blood film shows marked achromia and extreme variation in the size and shape of the red blood cells. A large number of nucleated red blood cells and red cells in all stages of fragmentation constitute the chief features of this disease.

The diagnosis is suggested by the history of anemia since infancy, enlargement of the spleen in a patient of Greek, Italian or Syrian parentage, characteristic facies, roentgenological changes in the bones indicative of extreme hyperplasia, excessive numbers of nucleated and fragmented red blood cells in the blood.

Transfusion is useful in tiding these patients over a critical period. Otherwise there is no known form of treatment which is beneficial in correcting this disturbance.

Turning now to treatment: The successful treatment of any disease is the final objective point of every physician. Therefore, it may be profitable to point out certain general principles in the treatment of anemia in infancy and childhood. As in other diseases, so in diseases of the hematopoietic system, there are conditions amenable to specifically indicated therapeutic measures. No set or routine plan of treatment should be formulated as every element or factor of the disease should be considered in each given case separately. At this point it should be emphasized that anemia and splenomegaly are symptoms of disturbance in the hematopoietic systems, just as cyanosis and dyspnea are symptoms of a respiratory disease. They are nothing more.

Since Minot and Murphy advocated the use of liver for pernicious anemia, the medical world has become "liver-minded." Even mothers and grandmothers ask continually why the pallor which Jane shows after a long day at school, with a strenuous dancing lesson and a hair-raising movie, is not an indication for liver treatment. *Iron,* too, has been heralded so broadly and advocated so widely that it makes one believe that instead of being strong-minded, physicians might rightly be said to be strongly *iron*-minded.

Everyone hears, after listening to the tuneful melodies coming over the radio, that vitamins A, B, C, D, and even E, will prevent and cure that boy of fatigue, will promote growth and health, and are specifically indicated for that anemic state in prematurity, after childbirth and long illnesses. Also you are asked, "Does your baby have enough sunlight? If not, get an ultra-violet lamp. It will drive away that pallid look, prevent colds and facilitate gain in weight." And as if this were not enough, in the mail, in the newspapers and in the popular magazines, there are advertised mixtures containing every combination of liver, vitamins, iron, copper, manganese, all combined in a pleasant-tasting, non-irritating and appetizing base.

No wonder the anxious mother and the practising physician say, "My mind is in a whirl. What is good for anemia and which medicine shall I use? Is the most expensive the best?" Are we not perilously close again to the age of "gun shot" prescriptions and should we not stop and think whether every individual with a blood disease requires an excess of all the vitamins, the addition of iron with the supplement of copper, ultra-violet light, transfusion of blood, and even splenectomy. The patient may not be injured by adding vitamin B or by adding some peptone, manganese, iodide, calcium phosphate, and perhaps a very little arsenic, and mercury and copper, but would this be rational therapy? It might not harm the patient, but it would make a sizeable dent in his pocket book.

Let us inquire, therefore, as to just what place in our armamentarium these widely advertised therapeutic measures fit. Certainly with the mass of theory and facts, means have been developed whereby we should be able to select some remedies which, under certain conditions, will act effectively in the prevention or in the amelioration of the disease processes.

In the treatment then of the manifestations involving the hematopoietic system, inquiry should first be made as to whether we are dealing with physiological anemia or pathological anemia. If physiological, as in the case of the anemia of prematurity and during certain stages of growth in the first year of life, specific hemoglobin-forming measures are not necessary unless there are other evidences of interference with normal growth and development, such as a secondary infection or an inadequacy or deficiency in the essential elements in the diets. Even then little can be expected until the source of the infection has been eradicated and the dietary defect has been corrected. If the anemia is pathologic, then the therapeutic measures to be chosen should be those which are known to have a selective action on the restoration of the blood. They serve in the relief of symptoms and in the correction, insofar as possible, of the underlying causative factor.

As regards diet, an ideal diet must be so balanced quantitatively and qualitatively as to meet the needs of the growing child. An adequate diet must be supplied in suitable amounts to bring about a normal gain in weight, an increase in growth, and to insure the preservation of health. Speaking broadly, it should contain in proper proportion, protein, fat, carbohydrates, water, iron, iodine "traces," copper, and manganese, as well as the essential substances known as vitamins.

The food stuffs used in this country in the average diet of children are adequate in iron content. The diet, therefore, in anemic states should be as varied as possible and should contain as large a proportion of natural foods as possible. Prepared milk, milled and purified foods should be excluded. In infants, iron-containing food, such as egg yolk, meats, leafy vegetables, oranges, apples, bananas, prunes, apricots, and peaches may be fed early, with safety. Indeed, there is a recent tendency to supplement the milk diet of infants with iron and mineral-containing foods at a much earlier age than has been customary in the past. That diet alone may prevent physiological anemia, either in prematures, full-term infants, or twins, is questionable.

We may pass rather rapidly over the effect which vitamins exert in benefiting children with diseases affecting the formation of

Scattered throughout the lung substance there may be an unusual number of calcified glands. At times, however, the examiner will be astonished at the extent of the lung involvement, when externally the patient seems in good general condition.

It is usually evident that the resistance of these individuals is below par, as shown by slight anaemia, loss of weight, or history of recent illness. Other foci of infection may be discovered co-incidently, i.e. periapical abscesses, infection of the tonsils or sinuses, or chronic inflammatory conditions of the prostate or cervix. Naturally it is difficult clinically to evaluate the relative distant effects of the tubercular and pyogenic foci, or to state which was primary.

When informed as to probable significance of this "spot in the eye," some patients tend to regard the examiner as an unjustified alarmist. Naturally the desire to disbelieve, is the source of the conviction that no serious abnormality could be present. It is amazing the number of patients who refuse detailed examination, for fear something serious will be discovered. By refusing to learn its presence, they lull themselves into the delusion that such a condition could not possibly exist. I know of no more false adage than, "What we don't know, can't hurt us." The fact, is the things we don't know eventually prove our destruction.

In all cases of episcleritis, inquiry will detect some cause of recent lowered resistance, i.e., long periods of fatiguing work, defective nutrition, recent child-birth or acute infections. The tubercular element usually latent in its calcium capsule, is enabled by the lowered resistance to leak out. Whether the area of episcleritis results from an invasion of the blood stream by actual bacteria or their toxins, or is merely a manifestation of local allergy, I leave for others to determine.

In the forty-eight cases presented, the preponderance of females is notable, there being 34 to only 14 males. While the ages varied from 6 to 68, the grouping of the younger adult life, 21-30, showed the highest incidence, there being 15. The next higher, 31-40 was 14. After that it falls off rapidly, and the condition is practically never seen at the extremes of life.

For its differentiation, the phlyctenule is most likely to cause confusion. The phlyctenule, however, involves either the cornea or its limbus. Furthermore, it causes marked photophobia with local tenderness and later vascularization of the cornea. Eventually the phlyctenular nodule breaks down and forms its typical ulceration.

Local treatment is indicated for the phlyctenule, while for the episcleritis it is of little consequence. Fortunately the general treatment of both conditions is practically identical, being the usual antitubercular regimen that heightens resistence to all types of infection, i.e., rest, fresh air, sunshine, nutritious food in sufficient quantity, and its vitamin content augmented by the addition of cod liver oil or simular products.

As far as I have been able to learn, this nodular episcleritis is the earliest external sign of severe focal infection, and which is generally tubercular in origin. It should be regarded not as an eye disease, but as symptomatic, i.e., a warning of impending danger. When recognized early and thus interpreted it is a measure of great economic value to the individual, or even a life saving clue.

SEX INCIDENCE OF PATIENTS SHOWING NODULAR EPISCLERITIS

Males	14
Females	34

AGE INCIDENCE OF 48 PATIENTS SHOWING NODULAR EPISCLERITIS

Under ten years	4
11-20 years	10
21-30 years	15
31-40 years	14
41-50 years	2
51-60 years	2
61-70 years	1

DISCUSSION

DR. GEORGE E. ADKINS (Jackson): It has been my pleasure for the last few years to be associated with Dr. Wilde in a number of these cases, some of them referred from my department to Dr. Wilde and quite a few referred by Dr. Wilde to the x-ray department, and I am speaking only from the radiographic findings as long as I do not qualify as an oculist.

When Dr. Wilde asked me to discuss the paper I went back through a number of x-ray reports that I had written for him. The usual case reads, "The bony cage is well formed, the pleurae are smooth and regular, costo-diaphragmatic sulci well formed, (the heart usually is moderately small for size), they all show a hilum thickening with hilum and bronchial glandular calcifications usually nested densely around the hilum and shading out toward the periphery." This type of findings indicated to me, as a rule, the bovine type of infection. Dr. Boswell is to follow in this discussion and he probably is going to tell me that I have no right to say what type of infection is present from an x-ray examination, this probably being true.

Just now I am reminded of the old classification of Dunham's fans (the term has probably been dropped from general use) and at one time it was said that one Dunham fan

Finally, as is well-known, in nearly all types of blood diseases there may be enlargement of the spleen. In our series of cases the spleen has been removed from patients suffering with (1) congenital hemolytic jaundice, (2) Cooley's or erythroblastic anemia, (3) splenomegaly with hematemesis, (4) anemia of the Banti's type, and (5) idiopathic purpura hemorrhagica. As a result of our experience it may be said that splenectomy is specifically indicated in congenital hemolytic jaundice, inasmuch as in the majority of cases the amelioration of the distressing manifestations is spectacular.

In this cursory review of the anemias of childhood, consideration has been given to the more frequent types of anemia met with in children and to outline the general rationale of its treatment. It has been made clear that intelligent therapy is founded on accurate diagnosis. As Dr. Blumer has said, "Diagnosis bears not only on treatment but on prognosis, and prognosis is of intense interest to the patient, his family and friends." Nowhere does this hold more true than in the morbid processes which affect the hematopoietic system.

Calcium and Phosphorus Prophylaxis; the Use of Dicalcium Phosphate and Diet*

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Time changes everything, altering medical opinion and practice. Our photographs of twenty years ago are viewed with ridicule and laughter, and medical textbooks of the same vintage are relegated to the attic as antiquated and useless. For the sake of illustration, let us trace the history of rickets dating from the period of Aristotle to our modern-day conception as to its causes, and we are amazed to find the many different theories which have been advanced in its behalf.

The medical and dental professions go through cycles of vacillating waves of thought, based on personal hobbies and faulty deductions, or else influenced by experimental data of others or ourselves which, unconsciously, establish for the time being a general trend of thought, resulting in our being termed "faddists." Unquestionably, this is true, and at this time we are initiating a new era in medicine and dentistry where our attentions are being centered on topics pertinent to inorganic salts. This recent interest will undoubtedly make us realize that, after all, the human anatomy is basically of chemical and physical origin; that with life there is daily metabolism and, in turn, anabolism and katabolism.

In the presentation of this paper, it is my hope, through personal investigations and experimentations of many others, that I can convey to you our past disinterest in the source of our food supply, especially relating to infants and children. Intrinsic attention has been wanting. In addition, I shall attempt to stress the value of continued scrutiny of the diet of adults, so that ultimately, beginning with the mother during pregnancy, following the infant, carefully guiding the child, diet and illnesses included, old age will be reached physically strong, with teeth intact and minus osseous deformities so often met with in latent life. Finally, longevity may be increased.

Experimental rickets in animals has been known to us since 1838, when a Frenchman (Jules Guerin), feeding young puppies on a restricted meat diet, found that they developed rickets. As controlled animals, which were suckled, failed to develop this deficiency disease, calcium deprivation was the deduction. Since that time, rats, pigs, rabbits and apes have been used in experimental rickets, and rachitic-like manifestations have been noted in sheep, chickens, horses, cows and goats.

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The use of inorganic salts in experimental rickets was brought to our attention by *Lilly and Newburgh,* (1931), who wrote a monograph "Cure of Rickets by Water Soluble Extract of Yeast and Sodium Phosphate." They unquestionably had in mind that rickets primarily was not a calcium but a phosphorus deficiency. Their conclusions were: "It is clear that the addition of sterile free, water soluble, extract of yeast plus secondary sodium phosphate to a rachitogenic diet caused the disappearance of the rachitic skeletal changes in rats."

In contrast to our experiments, the amount of inorganic salt employed by them was greater than that used by us, and, other than this, no form of yeast was added to the daily ration given to the rats included in our observations.

Apropos of the use of dicalcium phosphate, I thought it would be interesting to know whether or not dicalcium phosphate had ever been used, either in animal husbandry or in the human being. As lime phosphate enters so decisively into the feeding of animals and is necessary as an ingredient in food, the problem arises to obtain a lime phosphate carrier of concentration and high solubility, so that the lime and phosphate can be assimilated by the body of the animal. **Wolff* (1903) stated: "It is always advisable that young animals, after they are weaned from the mother receive three times as much phosphoric acid and lime as the minimum body requirement." Indeed, this is a very important statement.

In 1859, dicalcium phosphate was described in literature as a food complement for animals. Though there are three calcium phosphate salts, 1. mono-calcium phosphate, which is disagreeably acid and dissolvable in water, and used as an ingredient in baking powder; 2. dicalcium phosphate, which is only slightly soluble in water, insoluble in alkaline medium, but quite readily soluble in weak acids such as are found in the stomach; and, 3. tricalcium phosphate, which is soluble only in strong acids such as sulphuric acid, and which is the main mineral ingredient in bone meal and bone ash; in animal husbandry, the added inorganic salts have been limited to the last two. Due to the prohibitive cost of dicalcium phosphate, this has resulted in the use of the tricalcium phosphate exclusively.

Physical Characteristics of Dicalcium Phosphate

This salt is a white, finely granular powder passing a 340 mesh screen. It is odorless and tasteless and produces no disagreeable sensation in the mouth. When packed it has an apparent specific gravity of 1.060 to 1.070. A new process for the manufacture was made possible recently. The dicalcium phosphate has available P_2O_5 48.21; a total P_2O_5 of 48.65 and calcium as calcium oxide (CaO) 39.38 per cent. The ratio of calcium to phosphorus is 1.3 to 1; this is the important point. There is a difference between dicalcium phosphate obtained from an inorganic source and from bone meal. This salt has the greatest amount of available P_2O_5 and CaO, and the ratio of calcium to phosphorus—as previously stated—is 1.3 to 1, practically the same as calcium and phosphorus exit in the human anatomy.

The unrefined salt (Dicapho) has been used extensively in animal husbandry since 1929. As my deductions in the human antedate the rat report (which was performed for us by Dr. Philip B. Hawk of the Food Research Laboratories, Inc., of New York City) in that neither cod liver oil nor Vitamin D was necessary where dicalcium phosphate was given as a complimentary salt, prophylactically or curatively in rickets, this salt alone has been added to the food of animals from which these expressions and observations have been deduced. This salt, dicalcium phosphate, was given for study and experimental work in April, 1929, and the plan and outline of the reports herein given was suggested in detail by the writer.

**Koehler,* after very extensive and extremely carefully conducted tests at the experiment station in Moeckern, Germany, covering a period of six years, found that the comparative amounts of P_2O_5 and CaO retained in the bodies of lambs from various phosphate carriers such as dicalcium phosphate, tricalcium phosphate, steamed bone meal, also bone ash, were as follows: The amount of P_2O_5 that the body was able to utilize from dicalcium phosphate was 54.3, as compared to bone meal 13.1, and bone ash 14.2; practically four and a half times as much from dicalcium phosphate as from bone meal or from bone ash; CaO (calcium oxide) 55.9; steamed bone meal 21.8; and bone ash 18.3, affirming our belief that there are differences in dicalcium phosphate salts.

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*Wolff. E.: Landwirtschaftlichen Versuchs, 58:293, 1903.

*Koehler: Landwirtschaftlichen Versuchs Station, 61:349, 460, 461.

**Honcamp and Dragor* (1919) conducted artificial digestion tests of calcium phosphate carriers, and these were their deductions: Total P_2O_5 in dicalcium phosphate 41.41; citrate soluble P_2O_5, 38.42. What do we mean by "citrate soluble," and of what particular interest is the suggestion of "citrate soluble" at this time? The dicalcium phosphate that we are using is citrate soluble, or, in other words, acid soluble; the more acid soluble the preparation is, the greater is the availability of this particular salt. Steamed bone meal: total P_2O_5, 32.92; citrate soluble, 0.77; lacto phosphate: total P_2O_5, 22.06; citrate soluble, 12.92; bone meal total P_2O_5 17.66; citrate soluble 0.83; we infer, therefore, that there is no comparison from the standpoint of artificial digestion of various calcium phosphate carriers between dicalcium phosphate and the other salts having a similar combination of elements.

In 1926, *G. Bohstedt, R. M. Bethke and B. M. Edgington* experimented with dicalcium phosphate controlled with tricalcium phosphate, precipitated bone meal flour and calcium carbonate in a grain ration. At the end of the study, the lot to which dicalcium phosphate had been fed made an average daily gain of 1.09 pounds, against 0.62 pound in the tricalcium phosphate fed lot, and 0.90 pound in the precipitated bone meal flour fed lot. *Bothstedt, Bethke and Edgington* (1926) determined that in the dicalcium phosphate supplemented ration there was a high ash content, viz. 63.33 per cent, and a great breaking strength of bone, viz. 1219 pounds; while in the precipitated bone meal flour lot the ash content was 61.12 per cent, and the breaking strength only 1012 pounds. Why mention this? Because the ash content of bone is directly proportional to the amount of calcium and phosphorus that is ingested and retained. We know in rickets there is a direct relationship between the blood serum and the bone ash. When the blood serum has an index (by which is meant the calcium times the phosphorus content of the blood) of 30 or less, and the bone ash is 30 or less, the body is neither utilizing nor receiving a proper amount of calcium and phosphorus. There is a direct relationship between bone ash and bone sera, as far as calcium and phosphorus are concerned.

In a Government report where 26 cavalry horses were observed for a period of four months the conclusions were as follows: *1st group:* 13 horses—the same ration of grain and long forage, to which was added one ounce of dicapho per week for two weeks; thereafter ½ ounce per day for three and one half months. *2nd group:* 13 horses (fed the same ration), with rock salt substituted in the place of the unrefined dicalcium phosphate. Group 1 (where dicalcium phosphate was given) showed "net gain of 420 pounds or an average gain of 32.3 pounds per horse;" whereas the horses in the 2nd, or controlled group (where rock salt was given in place of dicalcium phosphate) made a "net gain of 140 pounds, or an average of 10.8 pounds per horse." Conclusion: "It is believed that the test shows that dicapho salt is of great value for fattening and conditioning thin horses. . . ." What is true of horses has been equally true of cows, chickens, turkeys and other animals.

I shall now briefly discuss the observations that we have made in sheep. I do not know if you are acquainted with the fact that animals have metabolic diseases which are similar to human diseases, or, I should say, clinical entities. We have in the child, rickets; and with rickets we have defective calcification of the teeth. My reason for referring so much to rickets is that there is a direct relationship between the defective calcification of rickets and defective calcification of the teeth. Now, mind you, I am not discussing caries. There is a difference between caries of the teeth and defective calcification of teeth; the defective calcification is due to deficiency in calcium, and caries is due to deficiency in phosphorus. In chickens we have leg weakness; in sheep, limber leg, and in the horse the drop foot; all are allied, kindred metabolic diseases.

In Del Rio, Texas, is the ranch of Mr. J. B. Moore, who was kind enough to follow the directions given him, limber leg had been the basis for an appreciable loss of sheep every year. These sheep were kept, as far as possible, under a covered enclosure. They were not forced to eat the mixture that was placed beside their regular ration. The short time necessary to give such quick and remarkable results could hardly be accepted by you. The cure of limber leg among range sheep gave positive findings and definitely proved the value of dicalcium phosphate. These animals were not forced to take this salt, being permitted to consume as much of a salt mixture containing 40 per cent, dicapho and 60 per cent sodium chloride as they desired. This was placed in their stalls.

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*Landwirtschaftlichen Versuchs Station, 93:121, 1919.

No attempt at this time is made to evaluate the positive or negative findings that various investigators have obtained by the use of viosterol or vitamin D therapy.

Kramer, Shear and Siegel (1931), in the Journal of Biological Chemistry on the "Me chanism of Healing in Low Phosphorus Rickets," conclude: "The relation of the calcium times phosphorus product" (which is called the index) "to the presence of new calcification in the healing of active rickets has been so regular as to suggest strongly a casual connection. The failure of calcification with low products, and its occurrence with high products, has been noted not only in infantile rickets, but also in experimental rickets in rats. That this same relationship holds true for calcification *in vitro* has recently been confined and extended by **Horste*. . . "When rachitic rats were fasted, the product" (of calcium times phosphorus) "rose to high levels within twelve hours; healing was noted several hours later. . . This state of affairs, a normal product with no endochondral calcification, persisted for only a few hours, for whenever the product rose about the rachitic level, calcification rapidly followed. . ." In other words, here they are comparing a low index and the failure of calcification and the quick rise and the quick calcification, showing you the direct relationship again between the blood and the bone. "Summary. 1. Severe low phosphorus rickets was produced in rats by diets of various calcium-phosphorus content. The calcium times phosphorus product in the serum was always 30 or less during the cessation of calcification. . ." Now, this is a point that I desire particularly to stress in their deductions. 4. "Healing, induced by phosphate added to the diet, was noted histologically within twelve hours. Here, too, the rise in the calcium times phosphorus product *preceded* the appearance of new calcification." In contrast to the addition of phosphate to the rachitic diet, the moment phosphate was added in their experiments, histological evidence that healing was in progress was manifested in twelve hours when phosphate was added, and it required three days when either cod liver oil or viosterol was added to the same rachitic diet in rats.

Another very interesting study on calcium and phosphorus by *Dr. David H. Shelling*, et al, in the Journal of Biological Chemistry of April, 1932, is "The Source of Excess Serum Calcium in Viosterol Hypercalcemia." "From the results of the above experiments it is evident that the excess serum calcium in viosterol hypercalcemia" (by which I mean the increase above the normal limits of calcium in the body) "may be derived from the tissues. This is shown: (1) by the occurrence of hypercalcemia in rats fed calcium- and phorphorus-free diets to which large doses of viosterol were added." . . . In other words, these rats received a diet not containing calcium nor phosphorus; cod liver oil and viosterol were added to these diets and the hypercalcemia was evidenced in the blood. And, therefore, the presumption is that the calcium and phosphorus were obtained from other parts of the body; and later on we will see just what the results of this abnormal hypercalcemia may lead to. Therefore, let me recapitulate. "From the results of the above experiments it is evident that the excess serum calcium in viosterol hypercalcemia may be derived from the tissues. This is shown: (1) by the occurrence of hypercalcemia in rats fed calcium- and phosphorus-free diets to which large doses of viosterol were added; (2) by the excess excretion of calcium on such dietaries;" —just think, thy found that the calcium was increased in the blood beyond normal limits though the rats were not receiving any calcium or phosphorus at all . . ." and (3) by the presence of roentgenological and histological evidence of decalcification of the bones." . . . In other words, the picture is as follows: A calcium-free diet, a phosphate-free diet—viosterol principally, and hypercalcemia, increased excretion of calcium, and finally a decalcification of the bones. Another interesting point: "Viosterol may cause toxic symptoms in animals without producing abnormal calcification in the soft tissues."

Apropos of bones, I mentioned to you that the bones of animals which were fed the proper ration had much stronger contour and could resist a greater amount of weight put on these respective bones. *Dr. Samuel Clark Harvey,* of Yale University, in "Time" of April 25, 1932, said: . . "An important observation has to do with diet while broken bones mend. If the diet lacks the necessary salts, the broken bone draws its material from the other bones of the body, and weakens them." This deduction was made after 4,000 rats in the laboratories at Yale had had their legs broken.

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*Horste, G. M.: Monatschr. Kinderheilk., 48:6, 1930.

I shall spend just a few moments on the work which was planned by me, and experimentally performed by Dr. Phillip B. Hawk, on "Secondary Calcium Phosphate Prevents and Cures Rickets Without Vitamin D." We made three separate studies. First, the utilization of various calcium salts, di- and tricalcium phosphate, calcium citrate and calcium carbonate. We used the tricalcium phosphate because it has one more atom of calcium than the dicalcium phosphate; the calcium carbonate because that is the usual complement which is added to the food of animals; the calcium citrate because it was an organic radical added to an inorganic calcium. The second, the calcification of these salts; and the third the solubility. I will give you shortly a brief recapitulation of that.

In 1931, also in the Journal of Biological Chemistry, was an article entitled "The Comparative Antirachitic and Calcifying Properties of Irradiated Milk and Milk Derivatives" by *G. C. Supplee, G. E. Flanigan and O. J. Kahlenberg and Alfred F. Hess.* Their conclusions were: "The failure of viosterol to give the same degree of protection to chickens as cod liver oil, when fed at twice the recommended level and standardized against the same cod liver oil according to the rat technique, presents further stimulation for the study of the mechanism of the biological activity of natural products and the extracted and highly concentrated preparations.". . . That is a very important statement coming from Dr. Alfred F. Hess, because he, Steenbock and McCollum have given us the greatest amount of experimental data upon which vitamin therapy is based.

In another study, *(1933) *McCollum,* in association with *Klein and Kruse,* state: ". . As a part of the pathological picture of rickets, defective calcification of teeth arises from the same cause as rickets. The mechanism of the production of rickets is so well established that any diet may be calculated for its calcium and phosphorus content and the prediction made whether it will produce rickets and defective calcification of teeth. Examination and computation of the calcium and phosphorus contents of such published diets as are available justify the view that defective calcification of teeth, just as rickets, arises from a disproportion of calcium and phosphorus in the diet. . ."

Another very important series of deductions were made by *Dr. Adolph G. DeSanctis and Dr. John Dorsey Craig,* of New York, and published in the New York State Journal of Medicine, September 15, 1931, viz: "Cod liver oil in a dosage of three teaspoonfuls a day (about 170 Steenbock Vitamin D units) prevented rickets in 97 per cent of 100 cases studied. 2. Viosterol 100 D, given in 10-drop daily doses (300 Steenbock Units), prevented rickets in 77 per cent of the cases studied." In other words, we have here almost twice as many Steenbock units but we only protected 77 per cent as was protected by 97 per cent when cod liver oil was given. The next observation is "3. Viosterol 250 D—given in 10-drop daily doses (750 Steenbock Vitamin D Units), prevented rickets in 81 per cent. of the cases studied. 4. Viosterol 500 D—given in 10-drop doses (1500 Steenbock Vitamin D Units), prevented rickets in 90 per cent of the cases studied. 5. Cod liver oil in concentrate tablet form, given in doses of three tablets daily (150 Steenbock Vitamin D Units), prevented rickets in 92½ per cent of the cases studied. From the above, we note that in the form of cod liver oil, only 170 units of Vitamin D are necessary to protect the infant against rickets; in the tablet concentrate form, as many D units are needed, whereas when viosterol is given, even ten times the number of D units does not confer the same immunity against rickets. If rickets is solely a problem of vitamin D deficiency, why is it necessary to give so much more in its pure form (Viosterol D only) than when cod liver oil is given? As expressed by us in 1930, we still are of the opinion that rickets is not due to a deficiency of Vitamin D alone but that Vitamin A and possibly other factors play an important part in this disease."

In an article that was abstracted by the American Medical Association, from **Pfaundler,* a Viennese, in 1930, the question is again broached as to whether rickets is an avitaminosis. "In the first part of the article Pfaundler discusses whether the antirachitic principle is a vitamin. Investigations among various peoples, especially among those in polar regions, indicate that neither deficiency in ultraviolet irradiation nor deficiency of Vitamin D in the food can be the etiologic factor of rickets, because this disease does not occur among the infants of peoples who receive neither a sufficient ultraviolet irradiation nor antirachitic substance in the food. . ." In other words, the children of the polar regions get very little sunshine and no Vitamin D to speak of, and still rickets is unheard of.

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*Original contribution received 1933.

*Pfaundler: Wiener klin. Woch., 43:641, 1930.

Before the Southern Medical Association I read, by invitation, in New Orleans, November, 1931, an article entitled, "Rickets, a New Treatment;" and before the Medical Association of the State of Alabama in June, 1932, I read a second paper on "The Role of Calcium and Phosphorus in the Prevention and Cure of Rickets." I shall just extract important parts from these two papers: "Rickets, a chronic constitutional disease of infancy and early childhood, due to improper utilization of calcium and phosphorus, affects many of the systems of the body, especially the osseous. And, singularly, it is more often unrecognized than diagnosed." I might say, in passing, that defective teeth are more often unrecognized than diagnosed. "Many theories have been advanced as to etiology. The story is not completed." . . . Even such men as John Lovett Morse, and Hess, whom I have already quoted, and Pfaundler, and Julius Hess of Chicago, who said before the International Congress of Pediatricians a few years ago, "It is doubtful whether, with all our antirachitic measures, we shall be able to eradicate rickets, as we do not understand the dietary factors in its etiology," question the etiology of rickets.

Now, strange as it may appear, the idea of a deficiency in calcium has existed a long time in the minds of scientists, and I want to read you this little extract for interest's sake: "The important part which calcium plays in almost all bodily functions, long recognized, was strongly emphasized by Parey (1649), who refers in his works to a possible relationship between absence of calcium and presence of malnutrition." Just think—in 1649! "In an interesting historical account *Shipley* (1922) has called attention to the fact that the English physician, Walter Harris, in 1689, referred to the treatment of tetany by means of calcium. In "De morbis acutis infantum" he writes about a baby, scarcely a year old, suffering from severe convulsions: 'I undertook the treatment of this poor child and accomplished a cure by no other medicine than a few ounces of crabs' eyes mixed with crystals of tartar.' The bodies which the apothecaries sold under the name of crabs' eyes were in reality the gastric teeth or 'gastroliths' from the gizzard of the common crawfish. Shipley estimates that in this instance the child was given about 10 grams of calcium salts at a time." Consider this—1649, first recognized; and something tangible written about calcium therapy as far back as 1689.

Now, let us go to our modern conception about the amount of calcium that we need each day and about how our opinions have changed in the last few years. This is taken from an editorial "In Praise of Calcium," from the Journal of the American Medical Association, page 1977, December 27, 1930: "Not until comparatively recent years have students of practical dietetics devoted any serious consideration to the role of inorganic nutrients in food. . . Among the mineral nutrients, calcium has a dominant place from the standpoint of quantitative needs. . . Although calcium is abundantly present in nature, it is unevenly distributed in human food; in fact, most foods are characterized by a paucity of calcium. On this account, *Sherman* (1926) has remarked that the 'ordinary mixed diet' of Americans and Europeans, at least among dwellers in cities and towns, is probably more often deficient in calcium than in any other chemical element. A recent investigation in the department of chemistry at Columbia University by *Sherman and Booher* (1931) has stressed anew the relation between the calcium intake and the calcium content of the growing body. . . They, therefore, insist that application of these observations to the problem of normal nutrition should prevent any relaxation of attention to adequate calcium supply in food." . . . *"Vitamin D as a 'calcium mobilizing' factor is not a substitute for calcium. . ."* Recapitulation for "Rickets: A New Treatment," which was the substitution of from 10 grains originally to a teaspoonful of dicalcium phosphate daily in a child's normal diet in the place of cod liver oil, cod liver oil concentrates, or Vitamin D, was proven by me to be successful. In other words, a large number of children who had rickets, checked not only from the standpoint of a physical examination but x-ray manifestations and blood chemistries as well, were cured.

The second paper on "The Role of Calcium and Phosporus in the Prevention and Cure of Rickets" also brought out some very interesting points. Until recent years, McCollum, of John Hopkins University, has been perhaps one of the greatest exponents of vitamin therapy. I noticed in a lay publication, McCalls Magazine of May, 1932, a very interesting article by McCollum about teeth.

McCollum stated:. ..."Until recently I believed we were getting enough prosphorus but too little calcium. Now I am convinced that we need more of both these substances. Also, we need an adequate amount of the 'sunshine' vitamin D to enable the body to use the calcium and "phosporus which our foods furnish . . .A great deal can be done by eating more and more of the 'protective foods'—milk, green vegetables, and fruits. A simple way to supplement a diet poor in minerals is to take *two level teaspoons of dicalcium phosphate each day.—This will furnish about the same amount of calcium and phosporus as a quart of milk and should be taken in addition to the regular diet.* It is a practically tasteless powder and can be mixed with mashed potatoes, cereals, buttermilk, orange juice, or water. " . . Now this came from the pen of one of the greatest exponents of vitamin therapy in this country in May, 1932. My papers were published in the fall of 1931.

In passing, let me bring to your attention a few salient and interesting points regarding calcium: *"The difference in percentages in human and cow's milk is equalized by the body using only what is necessary to its life and growth and not attempting to use it all."* That statement is made apropos of the fact that the mineral content of cow's milk is from 4 to 7 times as great as the mineral content of mother's milk. However, the mineral content of mother's milk is utilized from 70 to 80 per cent, whereas the mineral content of cow's milk is only utilized from 30 to 40 per cent. Just why this utilization is not effected in the cow may partially be explained by the fact that the protein in the cow's milk is practically insoluble; whereas, in mother's milk the greater part of the protein is soluble. In cow's milk, the greater part of the protein as casein is insoluble; and we have evidence that the casein controls the amount of calcium and phosphorus that is utilized by the fact that the calcium and phosphorus is encased in the protein.

But, further than this, we have found out if we withdraw a certain amount of dicalcium phosphate from cow's milk and release it from the curd (the casein) and add the same back to the milk, where the curd is a fine curd, it is utilized. Might not this protein aspect be looked into further as far as the feeding of the cow is concerned? But remember the last statement: "The difference in percentages in human and cow's milk is equalized by the body using only what is necessary to its life and growth and not attempting to use it all." That is equally true of the use of added dicalcium phosphate to the diet.

I have had made not less than one thousand blood chemistries on children receiving from minimum doses of 5 to 10 grains a day to a teaspoonful three times a day. From two different sources, Dr. John A. Lanford, Assistant Professor of Pathology and Bacteriology, Medical Department of Tulane University, New Orleans, La., and Dr. Andrew V. Friedrichs, Assistant Professor of Pathology and Bacteriology, Tulane University, who have estimated the majority of my blood examinations, I have yet to find a hypercalcemia or a hyperphosphatemia.

"Life does not so much depend upon the ion as upon its chemical combination." (Hess, 1928). Functions of calcium: a. formation of bones—in newly born—75 per cent of ash is calcium and phosphate and constitutes 1.5 per cent of the body, nearly "three pounds in the adult man, of which 99 per cent is present in the bones; b. present in every normal cell —for cell functioning; c. adjusts action of bowel; d. regulator of the blood and presumably also for acid base equilibria, facilitating as well the coagulation of the blood; e. it is a functional ion in muscle contractility and stimulates the heart exerting a tonic influence on the vagus nerve; f. intravenously inhibits pleural effusion; g. stimulates the constrictor of the pupils; h. aids in digestion," and so on. (Bloom, C. J., Journ. Med. Assn. Ala., June, 1932). I am simply mentioning this to you in order to make you realize that calcium and phosphorus have more interest and are of more importance than perhaps all of the other elements combined.

**Williams,* who has written a very recent biochemistry, states that: . . . "Calcium can not be utilized unless phosphate is also available in suitable quantities. . . . Phosphorus metabolism is closely related to calcium metabolism. *While phosphorus occurs in food materials in many forms, . . . the only form that is absorbed by the intestines and utilized is, so far as is known, inorganic phosphate."* . . .

Dr. William Weston, of Columbia, South Carolina, has been interested in inorganic salts for a long time. The automobile licenses that we see from South Carolina bear "The Iodine State" and which is really attributable to the efforts of Dr. Weston. He continues to stress the increasing interest manifested regarding inorganic contents of food. He says: "Calcium and phosphorus have been studied over a longer period of time and until recently more intensively than have any of the essential mineral elements. The same striking variations are found in different samples of milk analyzed as occur with iron and iodine. . . . It is our observation that in these localities in which are found a high calcium and phosphorus content of milk, growth appears to be stimulated and when adult lift is reached the stature is much above the average and rickets is comparatively rare. . ."

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*Williams, Roger J.: Introduction to Biochemistry. Textbook. 1931.

Dicalcium phosphate babies weigh more and are better children, but you will have to see them to know that. *Weston* further states: ". . . outstanding companies are engaged in the processing of milk with the thought to produce milk that will naturally contain in sufficient amounts those elements that are known to be essential in supply the requirements of nutrition." And, again quoting from my article "The Role of Calcium and Phosphorus in the Prevention and Cure of Rickets," ". . . One might inquire, is rickets on the decline? In answer to this inquiry, my reply is assuredly no, though admission is made that the type we are noting is not as marked, nor nearly so physically impressive as it was years ago. Through limitation of time, I believe that our shortcomings in the treatment of rickets has been due to: 1. our disinterest in the inorganic salts of "milk;" I have been on the Milk Commission of New Orleans more or less for the past twenty years; we have always given a great deal of attention to water, to total solids, to bacterial content, but never once have we asked for a mineral estimation of our milk. Two years ago the chemist of our milk board was secured to make determinations and much to my surprise I found out that the best milk we have in New Orleans from a bacteriological and supervision standpoint, (and if we granted that a quart of milk daily was sufficient to give to the child its necessary needs—a gram of calcium and one and a half grams of phosphorus), the best milk did not furnish the amount necessary; secondly that the ratio of CaO to P_2O_5 was not of the proper ratio. In other words, we are producing certified milk as far as fat, carbohydrates, protein and bacterial count are concerned, but as far as inorganic content is concerned, we are approving very poor milk. To quote again: "2. Our disregard of a possible achlorydria." What does this infer? A good many children have an aversion to food; they will not eat; they do not like milk; they do not crave any food, as a matter of fact. I have made some very interesting determinations and found that many children having calcium deficiencies have also a dimunition not only of the total amount of hydrochloric acid but also of the free hydrochloric acid of the stomach. In certain cases where dicalcium phosphate was given to children who had rickets, and where it was possible to make extra determinations, these children have received a small amount of dilute hydrochloric acid in pepsin. Why? To increase the acidity. To increase the acidity is to increase the availability of calcium and phosphorus, and to increase the availability of calcium and phosphorus is to pave the way by which retention may be had. And again I have mentioned "our over-anxiousness in attempting to give the body something to mobilize salts when, as a matter of fact, there is an absolute paucity of these ingredients." *Viosterol can mobilize to the point of decalcifying the calcium tissues.* Similar results have been reported in a limited number of cases by Dr. Marion Keith, Greensboro, North Carolina.

The next study will, perhaps, be one of the most interesting for you as dentists. The title is "*The Production of Caries Immunity and Caries Susceptibility in Experimental Animals. The Significance of Phosphorus and the Calcim-Phosphorus Ratio," by *Drs. Kline, Kruse and McCollum,* the same McCollum who wrote the article previously quoted. He says: ". . . Although the present paper is to be devoted to the etiology of caries, we have found it feasible, indeed necessary, to point out the *lack of relationship between defective calcification and dental caries.* From the standpoint of definition, the two conditions possess nothing in common; and, from the standpoint of pathology, they bear no resemblance. Briefly, dental caries is a dissolution of the enamel of the tooth followed by invasion of proteolytic bacteria into the injured area with resultant decay of the tooth to ultimate decomposition of its crown. On the other hand, defective calcification is the result of a disturbance in deposition of calcium salts during the development of the tooth. Actually, then, dental caries and developmental defects, the latter arising from improper calcification, are separate and distinct conditions. But it is imperative to set right the erroneous impression that defective calcification must necessarily be associated with dental caries. We differentiate defective calcification as a condition having no essential relation to caries. We present evidence that the two are distinct entities and have different causes. We reaffirm the fact that dental caries and defective calcification may occur independently of each other, as numerous cases on record attest. We present facts in support of the view that when defective calcification exists with dental caries the former is not an essential cause of caries. We hold the view that defective calcification may intensify but never cause caries; and that between the two conditions exists not a causal but only casual connection. I am sorry that time does not permit my reviewing an article by Kline, Krause and McCollum in detail, because they have given us some very valuable information, especially as concerns your profession. "Evidence is presented which indicates that dental caries appears in rats because of phosphorus insufficiency in the diet. Application of previously recorded data shows that the calcium and Vitamin D content and the reaction of the diet so modifies phosphorus absorption that a critical level of phosphorus intake for caries immunity, applicable to all diets, cannot be assigned. The view is expressed that the critical level of blood phosphorus for caries immunity can be given a definite and fixed value; and from existing data in the literature a tentative critical blood phosphorus level in the rat was fixed at 10.0, 0.5 mg. of phosphorus per 100 cc. of blood." . . . "The experimental facts and theory set forth in this paper suggest numerous investigations which we shall undertake, and in which we invite the participation of other laboratories." This paper takes up in detail the various other theories, of food that becomes more or less impacted between the teeth; the effect of the saliva, which does have a very high phosphorus content; just what effect the bathing of the teeth by the saliva has on the teeth from the standpoint of phosphorus.

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*Klein, Henry, Kruse, H. D. and McCollum, E. V.: original contribution received directly from authors. 1933.

Now, I can only speak briefly on the composition of food materials. There are twelve chemical elements which chiefly compose the tissues of the body, namely: carbon, hydrogen, oxygen, nitrogen, sulphur, phosphorus, chlorine, sodium, potassium, calcium, magnesium, and iron. Of these twelve, the two most essential are, first, calcium, and secondly, phosphorus. To give you an idea of just how much is found of these metals and non-metals in the elements of the newly born, let us take a child that weighs 2820 grams. Of that amount calcium constitutes 29 grams, and phosphorus 15, potassium 5, sodium 4, magnesium .8, iron .3, and the other minerals, traces. 29 of calcium and 15 of phosphorus in a total body weight of 2820 grams.

Time does not permit my going into detail regarding the functions of salts nor the metabolism of calcium and phosphorus when given in connection with food, but I want to just give you a few extracts from a paper that appeared in the Journal of the American Medical Association, April 1, 1935, by *Alice R. Bernheim, M.D.:* "In 1911, Sherman called attention to the calcium deficiency of the average American dietary. Again, after twenty years, he stated that 'probably a larger proportion of the ordinary dietaries, both of adults and of children, can be improved by enrichment in calcium than in any other one chemical element.' He considers that the normal, or 'standard' allowance for protein, phosphorus and iron in the diet should be set 50 per cent above the average minimum, while for calcium the margin for safety should be even greater than this." . . . In other words, originally he thought that 0.45 gr. of calcium was necessary, and now he states that 50 per cent above the average minimum for protein, phosphorus and iron, and a greater per cent for calcium. In the matter of making a survey of the New York Hospital regarding dietary histories in 4,000 patients (unselected cases), only two received diets that were adequate in calcium. (Bernheim, 1933). Also, according to Bernheim "The long-lived Bulgarians of Metchnikoff fame were thought to owe their longevity to bacillus acidolphus, which, in prevailing over the putrefactive organisms in the intestine, saved the individual from absorbing toxins. May not this longevity be due rather to their diet, largely composed of sour milk and sour cabbage, thus providing sufficient calcium and the optimum acid medium for calcium absorption?"

Myers & McClendon (1920) believe that the upper intestinal tract, from three to four hours after the ingestion of food, remains neutral or ranges in favor of the acid side for an indefinite period of time. This view is in contrast to that which has been accepted by many who believe that the upper part of the intestinal tract is practically alkaline during the digestion of the food, and that there is no period where the acidity is greater than the alkalinity.

I have attempted to convey to you that calcium and phosphorus are more available in an acid medium and by giving food which increases the acidity proportionately more is metabolized. This has been responsible for the longevity mentioned by Metchnikoff, increasing the acidity, not only of the stomach, which, normally has a high acidity, but in addition by giving food that ultimately will produce organic acids and with intestinal reaction more or less acid, we will then facilitate the absorption of calcium and phosphorus.

Remember, in the metabolism of calcium and phosphorus we have a different picture; these elements can be absorbed from the stomach, then brought back to the upper part of the bowel, in turn be re-absorbed from the upper part of the bowel, finally are conveyed back to the lower bowel; in other words, it can be absorbed twice before it is finally excreted from the body.

Space will not permit my going into detail regarding the various other calcium salts that have been given to us for use in the human being. We have had calcium chloride, which has been used—very irritating to the intestinal tract. We have had calcium lactate, not a soluble salt and containing a lower calcium content. Though it is better tolerated, I have statistics which show that calcium lactate given in large doses has a negative balance on phosphorus; in other words, if you give a large dose of calcium lactate, ultimately you will have a dimunition in the phosphorus content of the body. Perhaps the next most important calcium salt that we have had given to the profession in recent years has been calcium gluconate. And I may be wrong in my statement, but I do not believe that calcium gluconate contains phosphorus. An important fact about dicalcium phosphate is that there is a relationship between calcium and phosphorus; and if there is a relationship between the two elements and you can get these elements in a medium that can be available, why not use it in preference to another preparation which does not contain phosphorus? You have other calcium salts: nitrate, bromide, sulphate, glycero-phosphate, tricalcium phosphate and the gluconate which I have also mentioned.

I am only stressing today rickets, defective calcification of the teeth, and caries due to deficiency in phosphorus, and that is all. But we have other deficiency diseases; tetany, osteomalacia, cranio-tabes, acromegaly, and so on. And in addition to these calcium deficiency diseases, we know in tuberculosis there is a deficiency, in sinusitis there is a deficiency, and in bronchial asthma there is a deficiency. What the relationship is I cannot state at the present time; but I am going to show you a few of the cases which exhibited these deficiencies.

And now, for the last observation that we have made in New Orleans—By Dr. E. Wander, Chief of Plant of Bay Chemical Company, Inc., New Orleans, and in a personal communication I received from him March 14, 1933: "We have attempted to determine the solubility of DICALPHO, Bone Meal, and Tricalcium Phosphate in the lactic acid of sour milk. Because of the difficulty of completely separating solids from liquids in milk by filtration, milk was permitted to become sour by standing at room temperature, and the lactic acid content therein was determined by titration. Solutions were then made of lactic acid in water which corresponded to the concentration of lactic acid found in the milk at certain intervals." . . . Now, the results of this examination in lactic acid content of various strengths for various hours are as follows:*The results show that phosphate, in different strengths of lactic acid content, is from two to five times as soluble as bone meal, tricalcium phosphate, and is proportionately dependent upon the acidity of the milk.*

Conclusions

1. No attempt is made to evaluate the virtues of or the falures associated with vitamin D therapy.

2. Coordinate efforts—between physician and dentist—by direct communication, report, on conference.

3. Periodic examinations, both physical and dental, are necessary.

4. Investigate the source of milk supply—the food of the mother—and the ration of the cow—lest too much will be taken for granted.
5. Examine milk—physically and chemically —not only from the bacteriological aspect and the total solid content, but from the inorganic determination as well.

6. Dicalcium phosphate, as a food complement, has its place in the daily diet—too much cannot be taken as the body will only retain that which it requires.

7. A balanced diet and a known supply of dicalcium phosphate obtained from an inor-

ganic source is advocated.

8. Healthy mothers—advised and guided by well-trained clinicians versed in diet and in obstetrics—and healthy cows, supervised by graduate veterinarians and pure milk commission regulations, will supply the best milk obtainable for infants; in turn, a proper diet and dicalcium phosphate will facilitate the rearing of children above the average in physique (weight, height, muscular development), and finally, teeth will be exhibited that will neither soften, decay, nor be permeated with cavities—the result of a calculated calcium and phosphorus intake and correct ratio over a period of years.

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Alcoholic Beverages as Factors in Automobile Accidents

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The medical profession has saved millions of lives in the last half century by applying scientific discoveries in the prevention of tuberculosis, malaria, yellow fever, typhoid fever, the plague, smallpox, diphtheria and other communicable diseases; and now if physicians will teach the public the well-known scientific truths regarding the physiology of alcoholic beverages (beer, wine and whiskey, etc.) the terrible slaughter and crippling injuries on the highways of the world may be reduced very materially and the general death rates in civilized countries may be decreased by perhaps 10 percent. What can the medical profession do besides participating in general educational campaigns to reduce the ravages of alcohol? Perhaps the greatest opportunity at present lies in employing the accurate, simple and inexpensive tests for alcohol in the blood and urine of all drivers of automobiles concerned in accidents. Every city, county, state, and United States Government-owned laboratory in the nation should be equipped with the inexpensive laboratory apparatus required to make tests for alcohol in the blood and urine; and whenever an automobile accident occurs the blood or urine of the driver of the car should be examined for its alcohol content.

Private hospitals will find it worth while to so equip their laboratories. If an injured person is carried to a hospital and the driver of the car is found to have more than 0.02 per cent alcohol in his blood or urine, it should be an easy matter to persuade him of his duty to pay the hospital bills and surgeon's fees of the persons who were the victims of his folly.

Physicians, and medical societies, should urge city, county and state authorities that in case of an automobile accident the drivers of the cars and their victims should be carried to a hospital for an examination of the blood and urine to determine the presence or absence of alcohol. The widespread use of the tests for alcohol in the blood and urine will at least prove, or disprove, the opinion that alcohol plays a major part in producing automobile accidents.

The educational effect of routine tests for alcohol in the blood and urine of drivers of automobiles involved in traffic accidents will by wholesome. When a few joy-riders have been proved guilty of driving when drinking and perhaps sent to jail and their licenses to drive taken away from them because examination of the blood and urine had an alcohol content of more than 0.20 per cent, other automobilists will learn of the danger of taking even one or two drinks and driving an automobile.

The public is almost wholly ignorant of the physiological effects of alcohol and of why the man who drinks even moderately is a potential murderer on the highways. Certainly no man or woman who is not a confirmed alcoholic habitué would run the risk of driving an automobile while under the influence of alcohol if he knew the scientific facts that Heise, Cabot, Myles, Fishbein, the British Research Council and German medical authorities have brought out in various articles. How can boys and girls, men and women who drive automobiles learn these facts unless the medical profession informs the public of the truth regarding the damages from social drinking? Will the medical profession, knowing the scientific facts about the dangers of even moderate drinking and driving an automobile, sit idly by and fail to aid in reducing the death rates from automobile accidents?

The Alcohol (Beer and Whiskey) Factors in Automobile Accidents.

Since accurate, dependable and inexpensive methods of determining the alcohol content of the blood and urine of persons who may have been drinking have been perfected, it is now possible to approximate the amount of alcoholic beverages an individual has taken before an automobile accident (Heise, American Journal of Clinical Pathology, Vol. 4, No. 2, March, 1934). The driver may appear to be partly sobered by an accident, or he may be able to walk and talk so that no one would suspect that he was drinking, yet examination of his blood and urine would show that he had had enough alcohol to render him an inaccurate and perhaps a careless or reckless driver.

It is generally accepted by physiologists, psychologists, and physicians, who have studied the reactions of persons following the ingestion of 1 or 2 cocktails or highballs, or 1 or 2 bottles of beer, when they have more than 0.01 per cent of alcohol in the blood they are more dangerous on the road than the man who is dead drunk. The person who has 0.02 per cent of alcohol in the blood may not be visibly intoxicated; but the person who has 0.05 per cent of alcohol in the blood is usually unconscious. Even if a person is killed in an automobile accident, if he has been drinking, a specimen of his blood obtained within an hour or two of the accident will show approximately the degree of his intoxication when the accident occurred.

Dr. Heise, in a preliminary investigation of fifty consecutive automobile accidents studied in Uniontown, Pennsylvania, reports as follows:

Alcohol accidents ....32; injured 71; killed 4
No alcohol involved ......18; injured 23; killed 0

This table shows that in these 50 consecutive automobile accidents 64 per cent were considered of alcoholic origin; and 36 per cent, in persons who had taken no alcohol. Of the total number injured (94) 75 per cent were in cars with alcoholic drivers, and 25 per cent were in cars with sober drivers. All of the 4 deaths in the 50 accidents were in cars with alcoholic drivers, and no fatalities occurred among occupants of the cars in which alcohol was not a factor in the accident.

There is no reason why more drivers of motor cars should drink in Uniontown, Pennsylvania, than in the average community in the United States; but on the contrary probably a large per cent of the population in the larger cities drink alcoholic beverages because they are more convenient to places in which beer and other intoxicants are sold, and there are more convenient to places in which beer and other intoxicants are sold, and there are more people in the cities who have the money to buy drinks and automobiles. There can be little doubt that most of the fatalities and injuries from automobile accidents occur when there is the combination of alcohol in the driver and gasoline in an automobile engine.

The Slaughter after "Cocktail Hour" and Liquor Parties. Hit and Run Drivers.

In a later and more comprehensive study of a larger series Heise (Journal of the American Medical Association, Vol. 103, page 739, Sept. 8, 1934) found that in 119 consecutive automobile accidents 74 drivers had sufficient quantities of alcohol in their blood and urine to account for the accidents, while no alcohol, or very small quantities, was found in the blood of 41 drivers. In the 74 alcohol accidents 155 persons were injured and 10 were killed. In the 45 non-alcohol accidents only 44 persons were injured and 7 were killed.

It is significant that in this series of 119 consecutive automobile accidents more wrecks occurred from 11:00 p. m. to 1:a. m., after liquor parties, at a time when there are comparatively few automobiles on the streets and roads, than in nine hours, from 6:00 a. m. to 5:00 p. m.—during the busiest part of the day when the streets and roads are thronged with cars of every decription.

Beginning at 5:00 p. m., after the "cocktail hour," accidents begin to increase and at from 6 to 7 p. m. there are more casualties than during any other hour of the day. Can anyone doubt that social drinking is the most important factor in this orgy of death and mutilation of bodies that takes place all over the United States from 5:00 p. m. to 1:00 a. m.?

From 6:00 a. m. to noon, at a time when the traffic of business vehicles is heavy, there were only 8 accidents, 7 of which were in alcoholics. Few people drink in the mornings, but as the day progressed the non-alcohol accidents decreased and the alcoholic injuries and fatalities increased.

That "joy riding" when alcohol and death are often at the wheel, is an important factor in automobile accidents is shown by the fact that in Heise's study of 117 cases there were more accidents, with twice the number of injured and killed from Saturday at noon to midnight Sunday, than for the other five and one half days of the week. On Saturdays and Sundays the number of alcohol accidents was 3 times as many as in the non-alcohol groups; and the persons killed were almost eight to one.

Of the "hit and run" accidents, due to the folly of the most despicable and the most cowardly drivers on the streets and highways, 7 out of 10 were found to have varying degrees (from 0.21 to 0.38 per cent) of alcohol in their blood. The other three were not captured.

Heise also found that drinking pedestrians with an average of 0.20 per cent of alcohol in their blood, were injured or killed in a number of accidents, though the drivers who hit them had an average of 0.14 per cent of alcohol in their blood.

It may be true that many others driving over the same roads had taken as many drinks as those who had the accidents. That does not discredit the value of finding alcohol in the blood of those who had accidents. The drinking drivers who escaped accidents simply had the good luck not to have the emergencies that overtook those who had the wrecks.

Certainly thousands of motor car drivers who have had one or more drinks do not have wrecks. Sober drivers usually keep out of their way, but the drinking driver, when the emergency occurs when he has to think and act quickly and accurately, will be less apt to do the thing which will prevent an accident than if he were not under the influence of alcohol. Someone has said that the man who takes one drink or one bottle of beer is one tenth as drunk as the man who has taken the 10 drinks or the 10 bottles of beer that will knock out the average drinker; so that the man who drinks at all is not as safe a driver of a motor car as he would be if he were a total abstainer from alcoholic beverages.

The Psychology of Alcoholic Motor Accidents.

Dr. Walter R. Mills, Professor of Experimental Psychology, Yale University, in discussing "Alcohol and the Psychology of Accidents," makes an unanswerable scientific statement regarding the relation of alcoholic beverages to automobile accidents. He says: "Alcohol accidents seem an avoidable loss if humans would generally recognize that alcohol anesthetizes and depresses the higher mental functions. The omnipresent motor car is unfortunately a mechanism through which the alcoholized brain and nerve centers of an even slightly intoxicated driver may function in a manner the more dangerous because it often passes unrecognized. It has been adequately shown that alcohol taken without food in amounts not exceeding 30 c.c. (the equivalent of two drinks of whiskey or two bottles of beer), produces a sufficient depressive action in most people to interfere somewhat with various mental functions; vision is impaired; the field of attention is narrowed; mental associations are slowed; and even if sleepiness is not produced the attentive consciousness tends to be so occupied with subjective feelings and thoughts that the individual is not easily aroused by the noises, lights or movements in his environment."

Dr. Mills adds: "All the king's horses and all the king's men can't possibly change the position of road curves, fences, telephone poles, and railroad crossings often or quickly enough to meet the changing intentions of drivers who are under the influence of alcohol."

The Moderate Drinker is the Most Dangerous.

Dr. Richard Cabort, Clinical Professor of Medicine, Harvard University, says the moderate drinker is the most dangerous person at the wheel of an automobile. Dr. Cabot's comments on drinking and automobile accidents should be read by every man who takes even one drink and then drives an automobile.

"Probably more serious than any of these effects of alcohol is the number of automobile accidents due to clumsiness and recklessness of those ordinarily called "drunken drivers" although their drunkenness has only reached the stage which makes them careless and unskillful and may have been produced by only one or two cocktails. The person has no idea he is drunk and would not be recognized as such under ordinary conditions. There is no safety for children on our roads until all those who drive automobiles can be prevented from taking a drink within six hours of the time when they go on the streets to drive.

"Of course, there is no possibility of this except under prohibition. It should be emphasized that these automobile accidents are due to the moderate—what is ordinarily called temperate—use of alcohol in amounts that would not disturb a man's speech or power to walk. It is noticeable in no way until it comes to handling such a machine as an automobile which demands quick and accurate cooperation of eye and hand, the accurate coordination of which is upset by even a moderate use of alcohol. Temperate drinking is thus more dangerous than excessive drinking as a cause of automobile accidents. The excessive drinker doesn't usually drive when he is drunk. There is no hope, therefore, of decreasing automobile accidents by working for temperance. Only abstinence can make us safe."

Just a Drink or Two—and Safe Driver is Turned into Reckless Traffic Menace.

Under the above title is discussing the terrible toll of motor accidents in the Uuited States, Dr. Morris Fishbein, Editor of the Journal of the American Medical Association, said: "The greatest menace in this reign of slaughter is the drinking driver—not the drunk, mind you, according to one high authority—as extensive experiments conclusively show.

"When your car is moving at a speed of 69 miles an hour, you are traveling 88 feet a second. A person reacts in about one fifth second to what he sees or hears, psychologists reveal. This is known as the reaction time. When the mind is controlled by alcohol, this time may be slowed to two fifths second, or even much slower.

"If you lose one fifth second in deciding what to do, you have traveled 18 feet, or 36 feet if you lose two fifths second. Either of these distances may mean the difference between safety and crippling or death."

Dr. Fishbein adds: "In Stockholm, Sweden, where they determine the actual amount of alcohol in the blood, 41 per cent of all men admitted to the hospital because of accidents were found to have alcohol in the blood.

In Great Britain, authorities feel that it is just as culpable for men to drive motor cars while drunk as it would be for an engineer to attempt to run a train while under the influence of alcohol."

Alcohol and Automobile Accidents in Germany and England.

The problem of the intoxicated automobile driver is not confined to the United States. The Berlin correspondent to the Journal of the American Medical Association (Jan. 18,

1932) called attention to the "numerous traffic accidents in recent months that have been due to intoxicated drivers. It is emphasized that a small quantity of alcoholic beverages is sufficient to reduce materially the steadiness, the keenness of observation and the reaction time of the driver. In the future, every driver of an automobile vehicle who causes an accident as a result of the ingestion of alcohol beverages will without exception be deprived of his license."

If the traffic rules of the Berlin, Germany, police were applied to all automobilists in the United States, our roads would be safer for sober motorists. They are as follows:

1. The arduous and responsible calling of the motor driver makes it necessary for him to abstain completely from all alcoholic beverages, both before and during his work.

2. The smallest quantities of alcohol are injurious for the motor driver. It is a widespread error that small quantities of alcohol have no deleterious effect. On the contrary, they cause at first an increase of self-confidence, followed by premature fatigue, and thus weaken his capacity for swift discrimination and reaction in the presence of danger.

3. A large proportion of motor accidents is due to the consumption of quite small quantities of alcohol.

4. Larger quantities increase the danger, and lead finally to intoxication and rash and foolish actions.

5. The license will be refused in all cases to persons inclined to intemperance.

6. While under the influence of alcohol, driving is strictly forbidden. Any driver found to be in a state of intoxication during his work will be placed under arrest and his car taken in charge by the police. If he is proved to be drunk his license will be withdrawn.

7. The most serious accidents occur in the case of so-called "joy rides," in which alcohol regularly plays a part. In these cases the driver is liable to a heavy penalty and the withdrawal of his license.

8. Every driver who does not totally abstain from the use of alcohol is not only a danger to himself and his fellows, but brings misfortune to his family.

The London Correspondent of the Journal of the American Medical Association (Sept. 7, 1935) writes regarding "alcohol and road accidents" as follows:

"In 1933 there were in Great Britain, 1,595 convictions for driving under the influence of drink. The committee submits evidence as to the effects of what it calls "subintoxicant" amounts of alcohol, and refers to the report of the Medical Research Council on alcohol, in which the conclusion is drawn that "the direct effects of alcohol upon the nervous system, in all stages and upon all parts of the system, to depress or suspend its functions, that it is, in short, from first to last, a narcotic drug." It leads many persons to take risks and make rapid decisions less judiciously than they otherwise would. This is a serious objection to the consumption of even small amounts by any one who is to drive a car.

The Medico-Legal Value of Alcohol Tests in Motor Accidents.

Since accurate, dependable and inexpensive methods for determining the presence of varying quantities of alcohol in the blood and urine have been worked out, it would seem that such tests would be of great value in deciding whether or not the driver of a motor vehicle in a wreck was sufficiently under the influence of alcohol to make him an unsafe driver. Without such tests it is obviously difficult to prove that the driver of an automobile was intoxicated at the time of an accident.

The medico-legal aspects of the drinking driver have been discussed by Heise and Halporn in a paper read before the Pennsylvania State Medical Association and published in Pennsylvania Medical Journal, December, 1932. They employed their method of examining the blood and urine of 200 individuals charged with drunken driving. They are convinced that the chemical test is of definite corroborative value in confirming, or disproving, that a driver was drinking at the time an accident occurred. They conclude that the corroborative value of the test for alcohol "is at least as great as is the Wassermann test for syphilis, and furnishes the only constant finding in all cases of alcoholic intoxication."

As proof that the alcohol test if of value in convicting drinking drivers in automobile accidents, Heise and Halporn cite results obtained in two counties in Pennsylvania:

"In Fayette County, in 1924, before the chemical tests were used, 34 persons accused of drunken driving were not found guilty and 21 found guilty or pled guilty. In 100 recent consecutive cases in which the alcohol in the urine exceeded 0.19 per cent by weight, 87 were found guilty or admitted guilt, 6 were pronounced not guilty but pay the costs (meaning "You are not guilty, but don't do it again."), and 7 were acquitted.

Butler County was unable to get one conviction in 1930, but a recent communication from E. H. Negley, district attorney, states, "The chemical test for alcohol was used in 20 of the 36 cases. During the past 6 months it is used in every case unless the defendant at once pleads guilty. We have not lost a case in which it is used, and it seems to me impossible to lose a case in which it is used."

The tests for alcohol in the blood and urine are simple and inexpensive and if city and state laboratories are equipped to make them, they may be utilized by legal authorities to produce evidence to convict automobilists driving while intoxicated. The widespread use of this test will also give additional information regarding the frequency of automobile accidents as a result of the use of alcoholic beverages. When motor drivers become convinced of the dangers from the use of beer, wine, or whiskey before, or while they are at the wheel, if they are wise, will become total abstainers.

Make the Punishment Fit the Crime.

It is important to find out just how many people are killed and maimed every year by drinking drivers. This information may be ascertained by requiring the police, or county, or state traffic, or other law enforcement officers to escort to a hospital, by persuasion if possible, or by force if necessary, the driver of an automobile, or the drivers of all cars involved in street or road accidents, to have specimens of their blood and urine examined to determine their alcohol content.

Chemistry does not lie, as will the average frightened drinking driver of an automobile after an accident. By means of simple and inexpensive tests it can be determined with a considerable degree of accuracy the amount of alcohol a driver has consumed in the last six or eight hours before an accident.

Since it seems probable that more than half the automobile accidents occur when drinking—not completely drunk—drivers are at the wheel, the blood and urine of the driver of any motor car, who has an accident or who drives through red traffic lights, or is caught speeding, or driving recklessly, should be examined for alcohol content. If an automobile driver is under suspicion of having had one or more drinks of beer or whiskey and he is innocent of having imbibed alcoholic beverages that make him a menace on the streets or public highways, the blood and urine test for alcohol will prove his innocence. If, however, the test shows that he has committed the crime of driving while under the influence of alcohol he should be punished; and "the punishment should fit the crime."

If the accident is a serious one, with one or more innocent people killed or seriously wounded as the result of a driver's drinking, he should be convicted and punished for manslaughter; and he should forfeit his license to drive an automobile for the rest of his life.

If the accident traced to a drinking driver is a minor one, or if he violates such traffic ordinances as disregarding a stop light or stop signals, or if he is found guilty of speeding, or driving recklessly, he should be fined, and his license to drive an automobile revoked for six months or a year. At the end of that time if he will take a pledge to abstain from the use of all alcoholic beverages, he might be given a driver's license, on probation, to report every month, or at least once a year for an examination of his blood and urine to determine whether or not he has been living up to his pledge. If he is convicted the second time for violating traffic ordinances while drinking, his driver's license should be revoked for life.

The Enforcement of Rule G by the Railroads.

Thirty years ago the superintendent of a division of one of the great railroad systems of the United States in discussing the causes of railroad wrecks said: "Rule G i.e., "the use of intoxicants and narcotics is prohibited," which the railroads have applied to every man who has anything to do with running a train, including train dispatchers, telegraph operators, conductors, engineers, firemen, flagmen, and switchmen, has been an important factor in reducing to a minimum the hazard of railroad travel. We found that the man who had been drinking the night before going on duty would forget or misunderstand orders, or would fall asleep at a critical moment, and as a result of train employees' negligence many terrible wrecks occurred. Then the railroad officials of the country formulated Rule G, and included it in their book of instructions to employees, with orders to transportation officials to enfore it to the letter. The cooperation of the railroad employees themselves in the enforcement of Rule G has reduced the number of train wrecks enormously.

The interpretation of Rule G by railroad officials has been that if a railroad employee who has anything to do with running a train is caught drinking, whether on or off duty, he will be discharged. As a result of this rule, and also because of the sense of duty to keep physically and mentally fit, practically all railroad engineers, conductors, train dispatchers, telegraphers, firemen, flagmen, and switchmen have been total abstainers for a quarter of a century. Partly as a result of Rule G they have not kept alcoholic beverages in their homes, so they have reared their children to become sober and upright men and women. There is no finer, happier and more efficient class of citizens in the United States than railroad employees and their families. No doubt a factor in their contentment is that during the time they have been employed by railroads they have not touched a drop of beer, wine, whiskey or other alcoholic beverages.

Rule G for Automobilists.

Sufficient factual and scientific data is submitted to convince any unprejudiced man or woman, that if every person in the United States who drives or owns an automobile, 'bus or truck, would adopt Rule G for themselves and for their employees, enforcing it as is done by the railroad companies, that the number of fatalities and automobile injuries would be reduced probably by more than fifty per cent.

In view of the long and successful enforcement of Rule G by the railroad companies it is suggested that a clause pertaining to intoxicants and narcotics be added to the safety pledge for drivers of automobiles and other motor cars, to be called Rule G and that it read as follows:

"I will abstain from the use of beer, wine, whiskey, gin, brandy, rum, opium, morphine, cocaine and every other form of narcotic for at least forty-eight hours before driving an automobile or other motor cars, on the streets or public highways."

Of course it is not possible to stop the consumption of alcoholic beverages by every man and woman who drives a motor car, because the average drinking automobilist cannot be convinced that the narcotic which he drinks in alcoholic beverages can affect his ability to drive an automobile—until he has a wreck; and even then, if he is not dead or unconscious, he will swear that he has not had a drink. They usually do—but if he is guilty of drinking, an examination of his blood will show an alcohol content of more than 0.02 per cent.

Whether the drinking driver admits it or not, one or two cocktails, one or two highballs, or one or two glasses of beer impairs his judgment and decreases his ability to control his arms and legs when the emergency before an accident occurs. Nevertheless, when the public knows the truth regarding the effects of alcohol beverages on automobile drivers, many will become total abstainers voluntarily—the only safe plan for anyone who drives a motor car.

Another Opportunity for the Medical Profession to Serve Mankind.

It is estimated that in the year 1935 more people were killed in the United States in automobile accidents than died of typhoid fever, malaria, measles, scarlet fever and diphtheria. Suppose that any one of the communicable diseases should cause the deaths of 36,400 persons and be reported as the cause of illness is over 800,000 others, many of whom became permanently crippled, what would our health authorities do about it? and how much money would the United States, the states, county and city governments spend to stamp such a disease out of existence? It seems probable that if our health authorities will join the effort to prevent automobile accidents, the mortality and morbidity rates from this cause may be reduced relatively as much as the death and sickness casualties from typhoid fever, malaria, measles, scarlet fever and diphtheria have decreased as a result of the measures that have been adopted by our health authorities in preventing these communicable diseases.

Of course there are many causes of automobile accidents, including various diseases that make drivers afflicted with them a menace on the streets and public highways of the United States; but no one will deny that the one greatest factor in the terrific slaughter of the guilty and innocent in automobile accidents is the drinking driver. Since alcohol, whether in beer, wine or whiskey, is a true toxin, a narcotic and a depressant drug, a few doses (drinks) of which causes homicidal tendencies in its victims, whether in an automobile or in a bar room, and since the medical profession is supposed to know the dangers from the improper use of drugs, it would seem that physicians should lead the fight in the prevention of traffic accidents. They should by example, show their patrons and other friends that they are informed of the facts that alcohol is a harmful habit-forming drug by refusing to drink beer, wine or whiskey either publicly or privately.

This article is prepared for consumption by the medical profession. It contains scientific facts, that express not merely my own convictions regarding the menace of the drinking driver, but, what is more important, the opinions of many of the most illustrious physicians in the world are quoted to show how and why it is dangerous for any man or woman to drink even moderately and then drive an automobile. Will not informed physicians have the courage to lead in a campaign of education to teach the public the scientific facts proving that alcohol beverages (beer, wine and whiskey) lead all other causes in the terrible slaughter on the streets and highways of the United States?

Treatment of Acute Circulatory Failure*

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Acute failure of the circulation can be due to a breakdown in functional integrity of either the central pumping station, the heart, or the systems of peripheral blood vessels. It is not our purpose here to consider the acute heart conditions due primarily to failure of that organ, but to consider the circulatory failure that arises during the course of acute infectious diseases and which is seen so typically in pneumonia and peritonitis.

Until recently we were taught that the heart is primarily at fault when, during the course of infectious diseases, the heart rate becomes rapid, the pulse collapsible, the patient obviously in a state of collapse and the circulation is seen to be definitely insufficient. Even at the present time, this teaching is still embodied in text books on clinical medicine and on all sides we hear references to "supporting the heart," the use of "heart stimulants" and other expressions and directions to attendants which indicate that such a conception is still the one most prevalent in the minds of clinicians. That attributing the fault to primary failure of the heart is not logical is borne out by observed facts. There is no difference between the phenomena of circulatory collapse in the course of acute infection and that from the loss of blood due to hemorrhage. In both instances the heart rate becomes rapid, the heart sounds faint and weak, the pulse collapsible, and the blood pressure drops. In both conditions following recovery, no means of examination will show that the heart is any different from what it was before the collapse occurred. Certainly in the circulatory collapse of hemorrhage one does not blame the heart, which a few minutes before was normal, with suddenly becoming mechanically insufficient and with being the primary cause of the circulatory collapse. This being true, it does not seem logical to blame the heart for the same phenomena occurring during the course of an infectious disease. It would appear then by analogy that there is an important factor that is present in circulatory collapse of infections and that due to loss of blood. This is quite true and essentially is the disproportion between circulating blood volume and vascular bed. The cause for this, of course, is obvious when hemorrhagic shock is present and the deficient volume of circulating blood is due to actual loss of blood from the vascular system.

A series of events occurs which in mild infections does not produce circulatory disturbances of marked clinical degree but which, if continued in severity, will lead to extreme circulatory collapse. When the temperature is elevated there is increase in tissue metabolism and, as occurs with an increase from any cause, the blood flow through the vessels is accelerated, the minute volume flow is increased and there is a certain degree of dilatation of the blood vessels to facilitate the increased circulation. The venous return to the heart from the systemic circulation is not appreciably reduced, and there is normal filling of the ventricles, blood pressure is well sustained and the circulation becomes nicely adjusted to the mildly altered conditions. However, in certain severe infections, this train of compensatory events has added to it a vasomotor paresis of the capillaries and arterioles with marked dilatation, greatly increasing the capacity of the vascular system. The toxic products of bacterial activity in the body produce this vasodilatation and McLeod has classified them as histamine-like substances. If the dilatation of the capillaries and arterioles is of great enough degree an animal can bleed to death in his own vascular bed. The stasis of blood in these depots, the largest of which are the sub-papillary capillary skin plexus, the liver and the splanchnic vessels, reduces the volume of circulating blood. This results in an insufficient venous return to the heart with consequent insufficient filling of the ventricles, and a reduction in the output of blood from the heart per systolic contraction. By reason of the reduced blood volume and the vascular dilatation the blood pressure drops and, due to a nicely adjusted mechanism, the rate of the heart increases in an effort to maintain an adequate minute volume blood flow with a smaller total volume of blood with which to work. In other words, the heart has to move a small amount of blood through the circulation rapidly instead of a larger volume of blood more slowly. The force of the heart contraction does become weakened, but this is due to no fault of the heart. It is a physiological axiom that the strength of muscle contraction is dependent upon the length of the muscle fibers and, when there is an insufficient volume of blood carried to the heart by the veins, diastolic filling of the ventricles is not adequate to stretch properly the muscles and as a consequence ventricular contraction is weaker than it would be if the ventricle were filled with normal blood volume. The stimulus to contraction is the same, but the conditions necessary for strong contractions are absent. It has been demonstrated that in peripheral circulatory collapse the heart is actually smaller instead of dilated. That the rapid heart, thready pulse and drop in blood pressure are due to peripheral vascular changes and not to primary weakening of the heart, is shown by the fact that the heart rate drops, the blood pressure rises, the heart sounds become stronger and more normal immediately upon institution of measures which will restore a more normal proportion between circulating blood volume and vascular bed.

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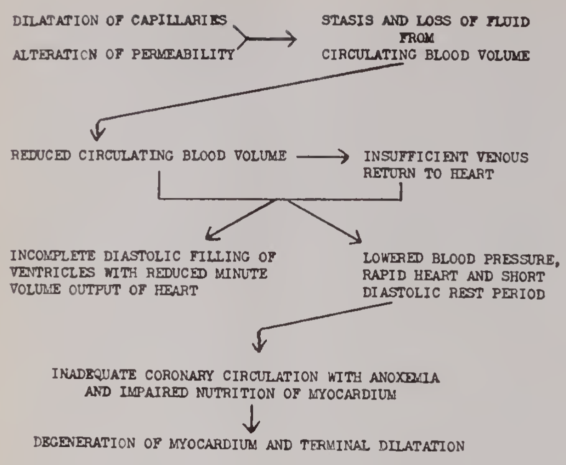
*Read before the North Mississippi Medical Society at Oxford, October, 1936.

If the reduced blood volume and low blood pressure exist long enough or in sever enough degree other changes occur of great importance. The circulation of the blood through the sult of this, together with a lowered pressure in the coronary vessels, the blood supply to the myocardium becomes insufficient and nutrition of the heart muscle suffers, to which is added anoxemia from a deficient amount of oxygenated blood. The myocardium is highly intolerant of anoxemia and glucose deprivation, so it can be seen that if circulatory collapse is maintained long enough the heart itself is going to suffer eventually. As a terminal event in peripheral circulatory collapse the heart does become dilated and at autopsy coronary arteries and consequent nutrition of the heart muscle occur during the diastolic phase of the heart. As the heart rate increases, the diastolic phase is shortened and, as a re- the pathologist finds a brownish, flabby, dilated heart and up until recently this was considered to be the primary cause of death. This is an entirely erroneous conception, however, and the heart only dilates because it is sinned against and not sinning. It has suffered and worked the best it could under long continued anoxemia and poor nutrition, and only dilates as a terminal event just before death. It can be said that the heart dies as the rest of the body dies and from the same cause. It has been proved that anoxemia is the only thing that will cause dilatation of the heart and when the heart dilates as the terminal event it has, up to that time, withstood anoxemia as long as the brain has and probably better. Witness the delirium or unconsciousness that occurs before the heart finally gives up.

In addition to the changes in the circulatory system itself, other effects occur in various organs and tissues. Besides the dilation of the capillaries as a result of bacterial toxin, the permeability of their walls becomes altered with exudation of plasma out into the tissue spaces and because of stasis in the capillaries this fluid is not reabsorbed and does not reenter the vascular bed. As a result of this, water is lost from the circulating blood volume and the blood is concentrated. Also, edema of the tissues takes place and because of this, together with anoxemia and lack of proper nutrition, various parenchymatous alterations occur in the different organs.

TREATMENT

Since the heart itself does not fail primarily and only fails as a result of the peripheral circulatory collapse, it appears obvious that no measures directed toward the heart itself are indicated, but that measures to restore a


DILATATION OF CAPILLARIES
ALTERATION OF PERMEABILITY
STASIS AND LOSS OF FLUID FROM CIRCULATING BLOOD VOLUME
REDUCED CIRCULATING BLOOD VOLUME
INSUFFICIENT VENOUS RETURN TO HEART
INCOMPLETE DIASTOLIC FILLING OF VENTRICLES WITH REDUCED MINUTE VOLUME OUTPUT OF HEART
LOWERED BLOOD PRESSURE, RAPID HEART AND SHORT DIASTOLIC REST PERIOD
INADEQUATE CORONARY CIRCULATION WITH ANOXEMIA AND IMPAIRED NUTRITION OF MYOCARDIUM
DEGENERATION OF MYOCARDIUM AND TERMINAL DILATATION

normal proportion between circulating blood volume and vascular bed are necessary. This means that digitalis plays no part whatever in the treatment of the condition nor does caffein-sodium benzoate or any of the other so-called heart stimulants. Woolheim has shown that digitalis decreases blood volume and Sollman and Pilcher have shown that caffein is a vasodilator. Thus, not only are these drugs of no use in the therapy of circulatory failure, but apparently are definitely contra-indicated, since they both produce the very conditions which we are trying to correct. Metrazol and coramine are popular lately, but their action is quite doubtful and, even if they were definite heart stimulants, we would not want to use them. In view of the fact that the heart is in no way at fault and is doing its maximum work under the conditions existing, anything which would in any way stimulate the heart without improving the conditions under which it is working would not only be wasted effort, but would probably accomplish definite harm. It has been my observation that for practical purposes no harm is done by the use of these drugs, as the amount of active digitalis contained in the small dose injected by the harassed interne or surgeon when faced with a collapsing circulation is probably too small to accomplish any definite harm. However, reliance upon injections of so-called stimulants under such conditions, while possibly not accomplishing direct harm, tends to satisfy a therapeutic conscience and leads to dependence upon them to the neglect of measures which will really help the situation.

Since a deficient circulating blood volume is the outstanding feature of circulatory collapse, measures directed toward correcting this, of course, are to be considered primarily. Many years ago Warfield advocated elevating the foot of the patient's bed and bandaging the legs from the ankles to the upper part of the thighs. Since that time, physiologists have shown that this procedure alone can increase the volume of circulating blood by as much as 100 c.c.

The introduction from without of solutions to increase the circulating volume of fluids is, of course, obviously indicated. The best fluid to accomplish this purpose is blood. Next to blood, hypertonic solutions are indicated, particularly dextrose, and for continuous treatment such solutions will have to be relied upon entirely. Solutions of dextrose of 10 per cent strength, or greater, should be used and in emergencies 50 per cent glucose. Besides the actual addition to the volume of circulating blood .this increases the osmotic pressure of the blood plasma and has a tendency to withdraw back into the capillaries fluid which has exuded into the tissue spaces. As there is nearly always a disturbance in the chloride balance, sodium chloride should be added to the glucose solution at least one time during the day. Adequate consideration of the fluid balance should also be given and in the infectious diseases with which is associated sweating, vomiting and diarrhea with increased respiratory rate there is a marked loss of water, in addition to the 2500 c.c. of water normally lost from the resting body within the 24 hours. This extra loss should be figured in the hypertonic intravenous solutions, taking into consideration the amount of fluid that the patient may be retaining by mouth.

The use of emulsion of acacia is theoretically quite proper, since the molecules are too large to transude through the capillary walls even though their permeability be increased, and by its osmotic pressure will hold a large amount of fluid within the vessels. However, there have been reports of adverse effects following its use and at the present time it is probably safe conservatism not to use it. Further experience and investigation may show that it is entirely safe.

Besides the introduction of solutions into the circulation which will increase the volume of circulating blood, it is very necessary to decrease the volume of the vascular bed by constricting dilated vessels. This can be accomplished by drugs which have such an action. Adrenalin acts definitely and promptly, but its action is quite transient and its main benefit is in emergencies before other and more lasting measures can be employed. It can be given from 0.5 to 1 c.c. hypodermically every three hours. Ephedrine raises the blood pressure promptly and its effect is more lasting. It can be given hypodermically in doses of three-fourths grain as often as every two hours. Pitressin has been used with apparently good results and is warmly advocated by some writers. However, Kountz and Gruber have shown that it has a constricting action on the coronary arteries, which would make its use undesirable when we are particularly anxious to increase the coronary circulation. Warfield advocates the use of strychnine in rather large doses and von Jagic reports excellent results from its use in the circulatory collapse of influenzal pneumonia. They use 1-20 to 1-15 grain every two or three hours. While the dosage suggested appears to me rather heroic, I have never used this drug for the purpose and cannot comment upon its value.

The slightest suggestion of cyanosis indicates oxygen. Theoretically, the use is indicated at all times during the existence of a definite circulatory collapse. However, for practical purposes, its use as long as there is the slightest tract of cyanosis is probably sufficient. It can be administered by either a nasal catheter or in the usual tent. Besides helping to prevent serious damage to the myocardium and other tissues from anoxemia, it definitely slows the heart, lowers temperature and, by reducing anoxemia in the tissues, decreases capillary permeability.

Where large quantities of glucose are being given more or less continuously for several days, buffering it with an appropriate amount of insulin will help in its utilization by the tissues and prevent loss of a large quantity of it through the kidneys.

TREATMENT

I. *Measures to Increase Circulating Blood Volume*

1. Blood transfusions
2. Hypertonic glucose solutions—from 10

(Continued on page 47)

The Diagnosis of Uterine Hemorrhage

DISCUSSION OF A CASE

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The art of distinguishing the cause of one kind of uterine bleeding from another requires proficiency in history taking and in both physical and laboratory diagnosis. The history is pointed out separately from physical diagnosis for sake of emphasis. Perhaps anamnesis would be a more expressive term, for it means the past history of any particular case of disease including information concerning the patient, her family, her previous environment, experiences, and sensations.

My interest in this subject was stimulated by a case that I want to report to you. It caused me considerable worry, and I made several mistakes before a consultant was finally called and a diagnosis established. In commenting on this case I shall not discuss the obstetrical complications of late pregnancy.

Mrs. M. M. D., white, age 26, giving her occupation as housewife was found in bed tossing from side to side in distress. The home was a neat new, modernistic house. The husband was not occupied at the time but he had worked for a bootlegger. Her last work before being married was given as telephone operator. The date I first saw her was March 3. She began menstruating February 26 and had suffered attacks of flooding since February 28, or for the last four days. She had skipped menstruation six months prior to the first week in January, when she flowed scantily for three days. After she had missed the first two months of this period of amenorrhea a local doctor made an examination and told her she was pregnant. Due both to the fact that her abdomen was flat after six months and that she had not noticed quickening, she decided he must have been mistaken.

Past History: No venereal disease, has never had a vaginal discharge; aborted about two years ago at two months; no other pregnancies. She had an attack of hemorrhage similar to the present one 14 months ago while in another town.

Menstrual History: Menarche at 14, duration 5 days with usually a 28 day interval, but has had several periods of irregularity and some prolonged periods. She has moderate dysmenorrhea that does not require bed rest. Family history revealed that the mother was dangerously ill with tuberculosis.

The negro cook had informed me over the telephone when she asked me to make the call that she thought the condition was a miscarriage. On examination the patient was found to have an anxious facial expression, temperature 98, pulse 100, respiration 28, some fullness of the neck in the thyroid region, large breasts without nipple soreness or secretion. She stated that the breasts had lately enlarged noticeably. The abdomen was slightly rounded with a tympanic percussion note in the upper half. There was voluntary rigidity in the lower half with pain to pressure over the uterus, ovaries and tubes—the most marked pain being in the right lower quadrant. The vulva was blood stained, the vaginal orifice small and some clotted blood was removed from the vagina. Blood oozed from an otherwise normal cervix. It was slightly softened, enlongated, and the external os not dilated. The body of the uterus was anteflexed and about normal in size and consistency. No masses could be felt at either side although the patient complained of considerable pain to pelvic manipulation. Both ovaries could be palpated and were normal in size. Of interest in the extremities was a wide two-inch scar over the right median basilic vein. The patient explained that this resulted from an abscess two years ago.

To bring to mind common causes of uterine bleeding due to the generative system, I present the following list copied from texts on differential diagnosis: salpingo-oophoritis, abortion, fibromyoma, carcinoma, subinvolution, retroversion and flexion, chronic metritis, sarcoma, chorion-epithelioma, ectopic pregnancy, popypus, erosion of the cervix, and tuberculosis of the uterus.

Schumann states that among the diseases affecting women, three stand out as being responsible for more destruction of female life and a greater morbidity than all the rest combined. These three are carcinoma, gonorrhea and pelvic infection resulting from abortion. I had most of the above listed conditions in mind and began to eliminate them. Due to the prevalence of gonorrhea it is necessary to consider it in making a diagnosis. Without giving the actual figures it is my observation that gonorrheal salpingo-oophoritis causes more cases of abnormal uterine bleeding than any other entity. Salpingo-oophoritis causes periods that are too close together and too long, the bleeding being due to the inflammatory reaction in the adjacent tissues. This will not correspond to this case since the menses have been several months apart, and because there is no history of the other signs of gonorrhea.

Abortion was held as highly probable. In fact, this had been held in my subconscious mind since the negro cook had placed the telephone call. In favor of abortion was: history of amenorrhea, enlarged breasts, profuse hemorrhage with clots. Against this was: no morning sickness, no detectable enlargement of the uterus, no definite softening of the cervix, no softening of the uterine body, no softening of the junction of the body and cervix.

Subserous fibromyoma was ruled out by the finding of a smooth symmetrical small uterus. Small intramural or submucous fibroids could not be ruled out.

From a practical standpoint carcinoma was ruled out by the age, and by the lack of a nodular, hardened uterus, easy to bleed on manipulation. However, cancers are sometimes found in young patients and can only surely be diagnosed by tissue study.

Sarcoma causes rapid enlargement of the uterus with several irregular hemorrhage. It was discarded.

Chorion-epithelioma follows pregnancy and causes profuse bleeding and a foetid odor. Ia could not be diagnosed due to lack of curet- It could not be diagnosed due to lack of curet- to lack of a repeated and increasingly positive Aschheim-Zondek.

Against subinvolution was the lack of history of abortion and the lack of finding a soft boggy uterus. Chronic metritis results in 95 per cent of cases from chronic subinvolution. Retroversion and flexion were not found. These cause bleeding due to congestion.

Polypus was not diagnosed due to lack of enlargement of the uterus and to lack of tissue for study.

Erosion of the cervix was eliminated because it failed to appear on inspection and because it does not cause such a profuse flow.

Although the mother had tuberculosis, it was eliminated due to negative chest findings. Genital tuberculosis causes hemorrhage when the local process grows more severe than the general condition.

Ectopic pregnancy was probable and therefore carefully considered since it is more frequently missed in diagnosis than any other pelvic condition. Having had the painful experience of missing a diagnosis of ectopic pregnancy once and consequently allowing the patient to die, is the reason for my over care on this point. Why couldn't this be aborted tubal pregnancy? In ectopic pregnancy there is a skipped period with the other signs of pregnancy and without the expected enlargement of the uterus. In this case the patient had gone a week over the time for the second menstruation. However, often a mass at the side of the uterus representing an enlarged fallopian tube can be palpated. This was lacking. Profuse uterine bleeding through the vagina is not common in ectopic pregnancy. She had not experienced severe pain, shock, and fainting as is often seen in ruptured ectopic gestation, but had experienced many swooning spells without the other signs of marked shock.

Having failed so far conclusively to pin the diagnosis on some fault of the generative system, I wondered if general disease might be the cause. Syphilis frequently causes menorrhagia and metrorrhagia not by attacking the uterus and ovaries, but by constitutional impairment of health with endocrine disturbance. Against this was the fact that she was in robust health before menstruation began. Other general and acute infectious diseases were not considered probable because of the profuse nature of the flow.

Having considered many of the common causes, I decided that incomplete abortion was the most logical. The patient thought she might be pregnant, the breasts had enlarged, and the profuse flow with clots correspond nicely. Consequently, I made the tentative diagnosis of incomplete abortion, told the patient she might expell the products of conception spontaneously, but if much more bleeding occurred she would have to be curetted. One teaspoonful of fluid extract of ergot was advised every three hours as needed to check hemorrhage. The bleeding checked and I did not hear from the patient until eleven the next morning when I was asked to rush to relieve her of another attack of flooding. The flow had checked on arrival but she complained of severe lower abdominal pain. I still held to the impression that the condition was an incomplete abortion and advised her that more time was required to expell the products of gestation. Morphien one-half grain was given hypodermically.

At 2:30 p. m. I was asked to hurry back on account of sudden great enlargement of the abdomen. Already fearing ruptured ectopic pregnancy from the information gained over the telephone, I rushed to the home to find the patient very flighty, showing rapid dyspneic breathing, restless and complaining of a peculiar pain about the heart. Pulse was 120 and small, the abdomen rounded—and in my frightened state, I thought it presented a fluid wave. However, there was no blueness about the navel. The umbilicus is usually blue when there is free blood in the peritoneal cavity. I told her that she had a ruptured tubal pregnancy and that no time could be lost in getting to the hospital. I telephoned the hospital to prepare for aspiration of the abdomen. On arrival the needle was inserted at the level of the right tube, which was where she complained of the severe pain, but no blood could be drawn out. The navel again was inspected but did not show a blue discoloration. By this time my excitement began to subside and I was able to collect myself and get back to a level-headed state. After pulling myself together I noticed that the extremities were warm, that her lips and finger nails were no more pale than in the forenoon—there was no cold sweat. Blood pressure reading was 140/90 which is certainly not low enough to account for a sudden severe, internal hemorhage. Temperature was 99, pulse had slowed to 88, and the respiration to 24. Blood examination showed 65 per cent hemoglobin (Talquist), 4,010,000 red blood cells, 7,700 white blood cells with 67 per cent polymorphonuclear neutrophils. Urinalysis failed to show anything of pathologic interest. A colon tube was inserted and a large amount of gas expelled. This removed the abdominal distention! Those of you who are sticklers for an exhaustive diagnostic study will give me severe criticism at this point for not having begun an ovulation test on first seeing the patient. This criticism is justified because at this point pregnancy has not been conclusively ruled out. However, I wanted to discuss this case in spite of this fault, because some of you practicing in small towns may not have ready access to properly qualified rabbits either.

With the abdominal distention relieved, I told the patient that her condition must still be an incomplete abortion and that I would pack the uterus and see if packing would not cause expulsion. On inspection of the external os preparatory to packing, the bleeding had stopped and a plug of mucous oozed out. This made me think that perhaps there was an intra-uterine polyp which caused the formation of mucous about it. On packing the uterus a partially obstructing mass was noticed on the left. This indicated a polyp or submucous fibroid. Against a fibroid was the fact that the uterine cavity was not lengthened beyond the normal 2½ inches. The patient was advised that a dilatation and curettage would be done the following morning if no gestational products had been passed by then.

March 5—The patient was better, wanted to go home without curettage. She dreaded ether on account of a supposedly weak heart. The pack was removed at 5:00 p. m. No flow followed.

March 6—The patient was released from the hospital. I found her at home, better—having very little flow.

March 7—She was worse again, suffering from cramp like pains that were thought to be labor pains. ½ c.c. of pituitrin was given hypodermically and repeated after half an hour. This checked the hemorrhage.

The patient improved until noon March 9 when she had a severe flooding spell. I requested that she get a consultant. She sent for a doctor in a neighboring town who had treated her in a similar less severe attack 14 months ago. He saw her at 7:00 p. m. and gave a history of a similar attack which was relieved by dilatition and curettage. He made a diagnosis of submucous fibroid, but advised a dilatation and curettage to rule out the possibility of pregnancy. This was to be followed by a pack to control the hemorrhage. He further advised a subtotal hysterectomy to be done about a month later, giving time to replenish blood and strength.

March 10—The dilatation and curettage was done and a firm pack inserted. The curettage failed to produce products of gestation but the same mass noted during previous packing was encountered again. This gave the impression that a submucous fibroid existed. The pack was removed March 12 and the patient was released from the hospital on March 13, improved. She readily regained her strength and failed to return for hysterectomy. Menstruation did not occur again until September 8.

The consultant, in explaining the scar over the median basilic vein, stated that another doctor had allowed some neoarsphenamine to escape into the extravenous tissues. Blood was taken for Wassermann while she was in the hospital but the tube was broken before it reached the laboratory. Had a negative Wassermann been reported, I would still think that she had syphilis on account of the definite information now obtained that she had been taking neoarsphenamine.

Due to the fact that she has had another six months period of amenorrhea, one may think that the diagnosis is not yet solved beyond doubt. The obstruction to the uterine sound might have been the margin of the internal os. Syphilis does not cause hemorrhage by direct attack on the uterus and ovaries but by constitutional disease may cause an endocrine imbalance and in turn give rise to bleeding.

Conclusion: Incomplete abortion, ectopic pregnancy, submucous fibromyoma, idiopathic and syphilitic hormonal disturbance are difficult to differentiate.

Transitory Amnesia Due to Allergy*

WITH CASE REPORT

S. B. CARUTHERS, M.D.
Grenada, Miss.

Newspaper accounts fairly often tell of individuals with amnesia who wandered away from home, and days, months, or years later suddenly remembered their identity. Such cases are usually called "temporary amnesia." The case which I report here would best be called "transitory amnesia." There is not much in the literature on the subject.

Dr. Frederic H. Leavitt[1] of the University of Pennsylvania reported 104 cases of amnesia admitted to the psychopathic wards of the

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*Read by S. B. Caruthers, M.D., of Grenada, Miss., before the Winona District Medical Society at Durant, Miss., June 16, 1936.

Philadelphia General Hospital in 1931, 1932 and 1933 out of approximately 12,000 psychopathic admissions. None of these were thought to be due to allergy. Alcoholism, organic brain disease, malingering, psychoneuroses, functional mental disease, and epilepsy, were the ascribable causes in most of these cases. Ten of the cases were post-epileptic, following an attack. The case I am reporting resembles petit mal or minor epilepsy, so may be related to these cases.

Rowe[2] reported two cases of petit mal due to allergy and cured by desensitization and removal of offending allergens.

Miller and Trescher[3] report a case showing amnesia, epileptiform convulsive seizures and hemi-paresis as manifestations of insulin shock.

Jonathan Forman[4] gives the case of a man aged 30 with petit mal seizures. The use of Rowe's No. 1 elimination diet brought prompt relief. The eating of chocolate, eggs, or cabbage was invariably followed by attacks.

Many authors report cases of major epilepsy due to allergy but I have not been able to find any other cases of petit mal due to allergy. Most are of the opinion that many cases of epilepsy are allergic. Some have found more epileptics reacting to skin tests than a similar group of so-called normal people. Others report no benefit from the allergic study and treatment of epilepsy and conclude that allergy is not an important factor in the etiology.

CASE REPORT

The patient, a white male 14 years old, came to me February 20, 1935, complaining of swelling of the lips. For several months the upper and lower lips on the left side had been swollen at times. It originally started on the lower lip. No pain or fever. Worse in the morning and better in the evening. History of coryza and sore throat for past three weeks but this swelling had priority. He underwent an appendix operation six weeks before I saw him.

Family history—Father and mother both have been subject, for years, to periodic headaches similar to migraine and at times they are somewhat "out of their heads" when having a headache.

Physical examination—There was some swelling but no tenderness of the left upper and slightly of the left lower lip. Inner aspects of the lips were normal. Ear, nose, and sinus examination was negative except that the left antrum transilluminated a little less clearly than the right one. The swelling of the lip was thought to be the most likely cause of this. The tonsils showed moderate chronic infection and a mild acute inflammation.

The diagnosis was angioneurotic edema. Skin tests advised.

On February 28, 1935, (eight days later) he returned and told me that the swelling returned that morning and almost closed the right eye. Lips not involved. This was the first time that right side of face had been affected. When I saw him the right eye was still moderately swollen.

He then told me the following important facts in his history. For the past six or seven weeks had had "funny feelings" all over and would not remember what had happened for as long as thirty or forty minutes at a time. He had not fallen, vomited, become actually unconscious, nor had any headaches. My opinion at the time was that this was a case of petit mal epilepsy and that it might be due to allergy just the same as his angioneurotic edema.

Skin tests were made that day and he was found to be sensitive to beef, cow's milk, eggs, cheese, peas, string beans, potatoes, and salmon. He was advised to avoid all these and to keep a food diary so that any other offending foods might be found.

March 4, 1935 (four days later) he returned. Had had no more swelling and no more amnesia since last visit. However he had had "funny feelings all over" since then. This morning he fell on a bank and hurt his right chest. This did not hurt him much but something seemed to pop in his head on the right side and has had a very severe bilateral frontal headache since then. It is a little better now, three or four hours later. His eyes were examined and no trouble found.

After this visit he did not return to my office until this year but I saw him on the street fairly often and he had no more of the edema, amnesia, nor funny feelings. No more falling. He told me recently that he remembered going to my office on one of the above occasions but could not remember anything that happened while he was there.

In the latter part of 1935 he lost the list of foods to which he was sensitive and had been eating anything he wanted until in February he had a few more of the "funny feelings" and some severe headaches. I gave him a new copy of the foods and he has been better since then.

SKIN TESTS

Pork
Lamb
Veal
Beef++
Mutton
Milk (cow's)++
Egg (all proteins)++
Cheese++++
Kidney bean
Lentil
Lima bean
Navy bean
Peas++
String beans++
Barley
Wheat
Banana
Grape
Grapefruit
Lemon
Orange
Pineapple
Coffee
Tea
Cocoa
Tomato
Cabbage
Chicken
Onion
Potato++
Corn
Oatmeal
Rice
Rye
Raisin
Beef++
Salmon+++

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Yellow Fever In Mississippi 1878-1905

HARRIS ALLEN GANT, M.D.
Columbia, Tenn.

CHAPTER VI

TAYLOR—1898

Taylor is a small village or hamlet, a station on the Illinois Central Railroad, eight or ten miles north of Water Valley. Lines running in a westerly direction from Taylor and a northwesterly direction from Water Valley, intersect at Orwood, forming the historic triangle within which the epidemic of yellow fever of 1898 had its origin. It was here and in adjacent territory that this epidemic was so thoroughly and carefully studied by Dr. H. B. Carter, U. S. P. H., and here he obtained data upon which he established the epoch-making discovery of the "extrinsic incubation period of yellow fever." Here and at Orrwood he forged the missing link, the necessary link in the chain of evidence which two years later was used in the establishment of the mosquito transmission theory of the disease. Taylor occupies an important place in this historic narrative, for it was here that the fever was introduced into north Mississippi, being traced from Orrwood, on the 30th of August, back to this point. On the evening of the 30th, after announcing the fever at Orrwood, I returned to Water Valley, stopping for a short while at Taylor, and was convinced from information received in regard to the death of Dr. A. S. Gray, on the 9th of August, that he had died of yellow fever. The fever was reported at Orrwood, I returned to Water Valley, stopping for a short while at Taylor, and was convinced from information received in regard to the death of Dr. A. S. Gray, on the 9th of August, that he had died of yellow fever. The fever was reported at Orrwood, and suspicions of its existence at Taylor mentioned. Dr. J. F. Hunter, the efficient secretary and executive officer of the Mississippi State Board of Health, acted very promptly, and immediately sent out the following announcement:

> "Headquarters, Miss. State Board of Health,
> "Jackson, Miss., Aug. 30th, 1898.
>
> "WHEREAS, Four cases of yellow fever have been reported by Dr. H. A. Gant, State Sanitary Inspector, near Orrwood, in Lafayette County, and suspicion attaches to Taylor's depot as to the focus of infection; therefore, I do hereby declare the above named places is quarantine under Dr. H. A. Gant, State Health Officer.
>
> "Dr. J. F. Hunter,
> "Secretary, Miss. State Board
> of Health."

Quarantine was immediately instituted. All passenger trains discontinued except through trains carrying U. S. mail, and these were required to run at a speed not less than forty miles per hour through infected towns. The inevitable fear and panic was in evidence, but nothing like that unreasonable terror that prevailed in preceding epidemics. There was, of course, much confusion and excitement during the first few days.

I shall insert here my report in full to the Mississippi State Board of Health, which gives in detail the facts as they were written at that time. These reports are official, and probably on record in the State Board of Health Office, in Jackson, Miss.. and may be referred to in order to verify the statements in this history.

They are rather dry reading, but very useful to show the condition, management, and state of mind of the people at that time, when everybody believed that yellow fever would travel through the air, and that anyone exposed to a case would certainly be seized by an attack. Fomites were the great ogre, in fear of which every one stood in terror. It is a great blessing that this superstition at last has been destroyed.

TAYLOR

On Sept. 1st the diagnosis of yellow fever was established at Taylor by Drs. Dunn, Haralson, and myself, of the Mississippi State Board of Health, and Dr. Gill of the Louisiana State Board of Health. Dr. Haralson remained at Taylor with me and on September 4th Dr. Carter, of the Marine Hospital Service, arrived and remained until he was ordered to Franklin, La. On Sept. 11th Dr. Cobb of the Marine Hospital Service arrived on the eighth and took charge of the work of fumigation. Dr. Haralson remained until the 12th, when he was ordered to New Orleans. On Wednesday, Sept. 14th, Dr. Birchett returned from Orrwood, and was placed in charge of the situation for the State Board of Health. There were in all 118 cases of yellow fever at Taylor, and in the territory for a distance of five or six miles around the place. Of these cases there were ninety-eight white and twenty colored. Thirteen deaths, all among the whites. I append a copy of Dr. Birchett's notes, with a list of the sick, and a history of their exposures which will be of great value in studying the natural history of the disease, period of incubation, and time of secondary or house infection.

SOURCE OF INFECTION

Before the arrival of any of the other physicians, I had made an effort to arrive at the source of the infection, and stated to Dr. Haralson upon his arrival that I was unable to trace the fever to any other source than Dr. Gray's house. Dr. Gray had died on August 9th, and was attended by Dr. Whitson, who, upon inquiry stated that his symptoms were peculiar, and that he was uncertain as to the nature of his sickness. From members of his family I learned that the doctor had had black vomit and suppression of urine, and I came to the conclusion that he died of yellow fever. I was unable to learn of any sickness occurring before his death, of a suspicious character outside of his family, although, as is usual, there were a number of wild rumors afloat. The people thought probably the disease had been introduced by returning soldiers having passed through the town or by a tramp who was said to have been sick in the town some time in July.

It was impossible, however, to get dates or definite information in regard to any of these. The next death was that of young Hamp Williams, who died on August 10th, the day following the death of Dr. Gray. He had visited at the Gray house after there were four cases of sickness there, which we are now certain were yellow fever, although it was stated that he never went inside this house, but sat on the gallery. Now, the question is, how did Dr. Gray get the fever? There are two theories: the banana theory suggested by myself; and that the town was infected by a gang of negroes who were working on a contruction train at Taylor.

This latter is the theory advocated by Drs. Cobb and Waldauer, of the Marine Hospital Service, in which they claim that the disease was introduced by one George Riley, colored, one of the construction gang of the Illinois Central Railroad who had been living at Holly Springs. The negro went to New Orleans early in July for one day only, bought a second hand suit of clothes from a store on Poydras Street, and joined Snelling's construction gang, July 7th, at Goodman, Miss. He was taken sick the day of his arrival in Taylor, July 10th. He was attended by Dr. Gray, and states that several others in the shanty cars, and Mr. Snelling, foreman of the gang, were sick after he got well, and were attended by Dr. Gray, and Dr. Mathis. It is not stated whether Dr. Gray made his first visit on July 10th, or several days subsequently. Dr. Gray's books show no record of his having visited the cars at all. Dr. Gray's house was several hundred yards from the railroad track where the construction cars stood. Upon investigation it is found that Dr. Gray was not the first one that had the fever in his house. Dr. Cobb and I both agree that Mrs. Wilkins was probably the first case, she being a visitor at the house from the last day of June until July 19th, when she returned to her home, Holly Springs, and remained there until she received news of Dr. Gray's death, when she returned to Taylor. During her visit she was taken sick on the 7th day of July, and not on the 20th as reported by Dr. Cobb; according to her own statement she was not in Taylor on the 20th of

July. She was not subsequently sick, although exposed in the house after Dr. Gray's death. And the fact that she was not, although much exposed, convinced me that she was probably the first case, as agreed to by Dr. Cobb.

Dr. Gray's children were probably the first cases, since they did not subsequently have the fever, although exposed at the time, and also later at Orrwood, where their mother had the disease. I have the dates of Mrs. Wilkin's illness in her own handwriting, and she states that she is certain she is correct. She told Dr. Cobb that she was not positive of the date of her illness at the time she talked with him, but that she could fix the time positive by some letters she received while in Taylor. He never saw her again. After looking over her letters, she gave me the date of her sickness positively as the 7th of July. I quote from her letters to me as follows: "I first visited Taylor on the last day of June, 1898, which I think came on Thursday; I was taken sick just one week from that day on the 7th day with a chill, was confined to my bed several days, was very weak for some time. I remained there until Tuesday, July 19th, came home and remained there until I received news of Dr. Gray's death, when I returned to Taylor. I believe I have given you the dates correctly and hope they will be of some assistance to you."

This was before Riley and the construction gang reached Taylor, and of course destroys the theory that Taylor was infected from that gang. But even if we admit that her statement to Dr. Cobb as to the time is the correct one, still it is improbable that Dr. Gray could have infected his house from visiting the shanty cars at any time subsequent to July 10th and prior to July 20th. It has been well established that house infection requires from fourteen to twenty-eight days, and some times longer; consequently, neither Dr. Gray's house nor the cars could have become infected from the 10th to the 20th of July.

The cars were certainly not infected before arriving at Taylor, because the train was made up in Jackson, Tenn., and other places where they had been lying for months. It is therefore out of the question to think that this bridge crew could have so infected Taylor in ten days as to make it impossible for Mrs. Wilkins and the Gray children or any one else to have contracted the fever from passing close to the cars. In fact, the subsequent history of the epidemic shows that there were no cases infected outside of house until late in October, if then.

Is it not strange that Mrs. Wilkins and the Gray children should have become infected first from the cars, and that no negroes were among the first reported cases? It is certainly probable that if Riley and the other negroes of the gang had yellow fever, they would have communicated it first to colored people, whereas the negroes of Taylor had the fever after Dr. Gray's death, and the announcement of it by the State Board of Health. The theory of the infection from the construction gang is too full of error and too short of substantiating facts to be seriously considered by any careful sanitarian.

BANANA THEORY

Mrs. Wilkins at the time she visited in Taylor received by express from New Orleans, on May 30th, 1898, a bunch of bananas about seventy-five pounds in weight, packed in straw. They were taken from the steamer "Andes" direct from Port Limon, Costa Rica, having passed the Louisiana quarantine station on May 26th.

The bunch was taken off the ship and taken directly to Foto Bros., who immediately shipped. The box of bananas was packed with rice straw furnished by Getsinger, Canal Street. These are the facts essentially given to Dr. Cobb in his report. Upon arriving at Taylor, the box was taken to Dr. Gray's house and opened on the back porch, the straw being thrown in the back yard or lot. The bananas were not in good condition; a wash pan full, over-ripe and mashed, was picked off. The bunch was hung in a dark closet in the kitchen near the stove. The kitchen was rather large, with a closet about five by six feet. Mrs. Wilkins states to me that a few days before she left there, or about June 15th, the bunch of bananas was removed to her bed room because it was suspected that the negroes were eating them.

I asked Dr. Carter to look into the sanitary condition of Port Linon. This he did, replying, "I have looked into the Andes matter. She came from Port Linom, with a clean bill of health from the inspector; I mean that the port had a clean bill of health, but she reported a death from yellow fever at Port Linom on June 15th, so it is very likely that there was yellow fever there when the Andes left." We know that usually when towns in Central and South America are reported as having yellow fever, it is after the development of a number of cases; so I feel satisfied that Port Linom was an infected town at the time of the departure of the Andes. I believe that the bananas were infected, and that the bunch received at Taylor infected Dr. Gray's house, and was the starting point of the epidemic in north Mississippi. I know of no better culture medium than bananas in a broken, over-ripe condition as these were. It has been suggested that the surface of bananas is too smooth to retain or carry infection, but this objection will not apply to the over-ripe fruit or to the stalk. It has also been asked why other localities to which bananas from this ship load were carried were not infected. It is possible, in fact, in my judgment more than probable, that other places were infected. At the same time, it may be that the ship load was immediately shipped to Chicago, and other non-infectible territory. It is not impossible that the epidemic of this year in New Orleans was started from this source. I know that the idea of fruit from tropical countries carrying the germs of yellow fruit is not popular from a commercial stand point; nevertheless, as a scientific fact I believe it can be established and am convinced that our fruit trade from tropical countries is one of our greatest dangers. From June 15th, the time according to Mrs. Wilkins when the bunch was removed to her bed room, to July 7th when she was taken sick, gives twenty-two days, which was not unusually long for a period of house infection. Even if it is admitted that she was not sick until the 20th of July, it is not beyond reason to suppose that the house on account of open condition and free ventilation was more slowly .infected than usual. The infection of the house by the bananas to my mind is more probable than the infection of the house within ten days from the shanty cars, or the infection of the locality from the shanty cars to such an extent that Mrs. Wilkins or the children of Dr. Gray could contract the fever in passing them. If the time of infection of the house from the bananas is longer than usual, so is the time of the infection of the house from the shanty cars shorter than usual, and if Mrs. Wilkins was sick on July 7, as she states, the infection from the cars was out of the question. It is significant that Mrs. Wilkins, the one to whom the bananas were shipped, and the one who probably had more to do with them, and in whose room they were finally lodged, should be the first case known in the entire town, and that the children, always more susceptible, should be the next. It is not possible for me to prove that the Andes was an infected vessel or that the ship load of bananas was infected, but judging from the fact that the port from which she sailed was subsequently reported as having yellow fever, I think it reasonable to conclude that the vessel was infected. Then, it is altogether possible that the bunch of bananas that was shipped to Taylor was infected in their handling.

Dr. Birchett's clinical notes on cases of fever at Taylor are quite extensive, too long to be included in this story. The following summary as given by him of cases that had complicating conditions or symptoms is not without interest.

The total number of cases at Taylor is 118. Number of cases in which black vomit occurred 13. Number of deaths occurring in black vomit cases 8. Number of cases in which suppression occurred 5. Number of cases in which riccough occurred 4. Number of deaths occurring in hiccough cases 2. Number of cases in which epistaxis occurred 2. Number of cases in which premature menstruation 15. Number of deaths occurring amongst cases in which premature menstruation occurred 2. Number cases pregnant 2. Number of cases miscarrying 1. Number of cases in children 15.

His notes are very valuable but owing to the fact that many cases had occurred there before the diagnosis was made after the death of Dr. Gray, they were not regarded by Dr. Carter as so valuable as those obtained at Orrwood. There was very much more excitement and confusion upon the announcement of fever, and it was much more difficult to trace the possible exposures, for the fever had evidently existed there for some time before Dr. Gray's death. Upon reviewing Dr. Birchett's report upon Taylor, I am satisfied that Mrs. Wilkins was not actually the first case in Taylor.

Dr. Birchett was requested to keep house records such as were kept at Orrwood, but he did not take charge of the situation until the middle of September, and the fever was found to have established a number of foci, perhaps two months before that time. The houses were close together, and the population consisted of whites, negroes, and transients. Dr. Carter and I were not able to get very satisfactory information, and even with Dr. Birchett's notes, he thought best to take the records of only three houses.

House No. 1, (Recorded by Birchett)

Rev. Mr. Williams, fourteen in family, two colored. Hamp was exposed to Miss Gray, who was staying at Dr. Gray's assisting Mrs. Gray in the care of her sick children; went to church with her, and sat on the porch with her awhile on their return home, was taken sick in the night with a chill, followed by a fever, that did not remit. Died on the third day. Died August 10th, had suppression; black vomit. (Diagnosis not made at that time).

Grover, (12) taken sick August 27th, in the night.

Mrs. W. taken sick Sept. 3, 8 a. m.

Ora, (24) taken sick Sept. 2, 12 p. m. Black vomit. Menstruated.

Lee, (22) taken sick Sept. 6th, 9 a. m.

Sidney, (17) taken sick Sept. 9th, 9 a. m.

Mark Joe, (9) taken sick Sept. 8th, during the night.

Vira, (4 1-2) taken sick 9th, 10 a. m.

Cleveland, (6) taken sick Sept. 10th, during the night. Died Sept. 25th in convulsions. (Suppression) at 8 p. m.

Nettle, (26) taken sick Sept. 15, 4 p. m., Menstruated Albumen.

Charles, (15) taken sick Sept. 19th, 1 a. m. Albumen.

Mr. Williams, taken sick Sept. 23 between 4 and 5 o'clock a. m.

Susan Thomas, (colored) taken sick Sept. 9 during the night.

Laura Spicer, (colored) taken sick Sept. 23. Delivered of an eight month old child on Oct.—

House No. 2.

Louis Sisk, six in family and colored girl.

Mrs. Sisk taken sick Sept. 7th, 4 p. m. at Dr. Gray's Aug. 9th at 7 a. m. Exposure continuous until taken. (Nursing).

Louis Sisk taken sick Sept. 8th at 10 a. m. at Dr. Gray's Aug. 5th, exposure.

Harry, or Henry, taken sick Sept. 8th, 12 p. m. at Dr. Gray's continuous.

Rodney, taken sick Sept. 13th, 10 a. m. continuous. (Albumen)

Charles (15) taken sick Sept. 17th, 1 p. m. continuous. (Albumen)

Paul, (10) taken sick Sept. 23rd, 5 p. m. continuous. (Albumen)

Su Joiner, (colored) taken sick Sept. 12th continuous. (menstruated).

Will Sisk (adjoining house) taken sick Sept. 2nd. Died Oct. 7th at 12:45 p. m.

Jesse Sisk, taken sick Sept. 6th, in the night, died Sept. 12th (black vomit)

Mrs. Will Sisk, Sept. 7th, at night.

Walter Morrison, Aug. 17th at Dr. Gray's constantly while they were sick.

House No. 3.

Captain W. C. Taylor, taken Aug. 10th, at 4 p. m. at Dr. Gray's Aug. 5th, for about half an hour, sat in the hall.

Mrs. W. C. Taylor, taken Aug. 11th at Dr. Gray's Aug. 5th for two hours; again on Aug. 19th, spent the morning.

Clarence, (colored) taken Aug. 25th.

Guy Taylor, taken Aug. 28th, 11 p. m.

Mrs. Taylor, taken Sept. 5th, 8 p. m.

It will be seen that Dr. Birchett's notes coincide with those recorded in Dr. Carter's note.

In fact, I have checked up on the "house records" both in Orrwood and Taylor, and find that they agree both in dates and locations, with the records contained in my report. On reviewing my report of the origin of the fever at Taylor, I am not persuaded that Mrs. Wilkins was not actually the first case in Taylor, but Dr. Gray's children and possibly others had had fever previous to her attack, and that their sickness was not recognized as such at that time. Children often have yellow fever in such a mild form that no diagnosis of the disease is made. Certain it is that Dr. Gray's children, although subsequently exposed in Taylor, and in Orrwood, were not sick. Mrs. Wilkins was a frequent visitor at Dr. Gray's, in fact, was related to the family and although she lived in Holly Springs, Dr. Gray's house seemed to be her second home. She stated to me that a few days before she left Taylor, or about June 15th, the bunch of bananas was removed to her bed-room, because it was suspected that the negroes were eating them. From June 15th to July 7th, when she was taken sick, gives twenty-two days, which was not unusually long for a period of house infection.

The banana theory, as related above, coincides beautifully with the mosquito transmission theory, because there is no doubt that mosquitoes were living on those bananas, infected either in Port Lymon, Costa Rica, or in New Orleans, where fever was then prevailing. If the time seems to be rather long, from the date Mrs. Wilkins received those bananas to the infection of the house, and the community, it must be remembered that mosquitoes can live for months on bananas. It is stated that Guiteras kept mosquitoes alive in Havana for one hundred and one days. So the banana theory of the origin of the fever in north Mississippi in 1898 holds good, but the bananas brought infected mosquitoes instead of fomites. This is the only instance in my knowledge of yellow fever actually having traced to fruit. It is true it had often been remarked that the fruit trade of Central and South America and West Islands was responsible for the invasion of the United States by yellow fever, but no one had proved that an epidemic was actually caused by fruit being received in a home. This banana theory at Taylor was published and much discussed at the time by both the medical profession, and the laity. Hon. Dunbar Rowland, one of the best-posted and most reliable historians in the South, in his review of the epidemics of yellow fever in Mississippi in the year 1899, says, "It was generally believed at that time that yellow fever germs were brought into the country clinging to bananas." It is very strange how many doctors at Taylor and Orrwood, who knew of this tracing of the fever by means of the bananas, did not think of mosquitoes in connection with them. They all kney of Finlay's statement that mosquitoes conveyed yellow fever.

Doctors Murray, Carter, Waldaur, von Badorf, of the United States Public Health Service, Doctors Dunn, Haralson, of the Mississippi State Board of Health, Dr. Gill, of Louisiana State Board of Health, and the local physicians, Mathews and Mathis, all knew of this tracing, and yet no one thought of the mosquitoes. "What fools these mortals be." Magna pars quorum fui. It goes to show how hard it is for people to give up old ideas, for every one at that time believed in that mysterious method of infection carried by an invisible and intangible substance, called "Fomites." It requires a long time for a new idea to sink into the human mind. It is not more than 300 years since Harve discovered the circulation of the blood, and the world labored under the impression that the earth was flat until the establishment of the Copernican system of astronomy 400 years ago.

One of the lugubrious incidents at Taylor was the death and burial of old Mr.—— on the fourth or fifth day after the State Board of Health took charge of the situation. He was living some distance, probably a mile in the country. alone in a house, on the side of the road close to a little branch where there were many willows and other trees over-hanging the road, making the place very eerie. When he died it was difficult to get any one to dig his grave, or to go near the house. Finally, we secured a couple of negroes who dug the grave in the cotton patch, nearby the house. At night, Drs. Carter, Cobb, Haralson and I went to the house, put him in his coffin, carried him across the cotton rows, and buried him. I remember that in crossing a gully my foot slipped and I fell between the cotton rows, and the coffin slipped down on me. But fortunately I was not hurt, and Haralson remarked "There is something to be said in favor of cremation after all, for if we had cremated the body, Gant wouldn't have been so smeared with mud." They had a great laugh at my expense, and years afterward Carter wrote me that he told this incident at a banquet given to Gorgas in Washington.

It was during the epidemic of this year that the railroad officials operated what was known as an immune train, running through infected towns, from Grenada to Holly Springs. The conductor of this train, Captain Binford, was a jolly, good natured, splendid man. We had occasion to ride with him often. Late in the season he said to me, "Doctor, I am uncertain whether I really have had yellow fever, and if I get sick I wish you would come to me promptly." I promised to do as requested, and sure enough, later in the epidemic, he was taken sick, had a mild attack of yellow fever, soon recovered, but was not required to go back on his train because of the ending of the epidemic.

When he was called before the railroad officials, asking for his regular run as conductor of the through passenger train, he was interrogated about having had yellow fever. They said, "Captain, did you not tell us that you were immune?" "Yes," he said, "But I did not know what that word immune meant. I thought it meant a man who had been married thirteen years, and had no children." However, the Captain was soon returned to his regular train.

TREATMENT OF ACUTE CIRCULATORY FAILURE

(Continued from page 37)

per cent to 50 per cent

3. Elevate foot of bed and bandage legs and thighs
4. Injection of acacia suspension?

II. Measures to Decrease Capillary and Arteriolar Volume

1. Adrenalin hypodermically 0.5 to 1 c.c. (emergencies only as action is to evanescent)
2. Pitressin hypodermically repeated frequently for sustained increased tonus of vessel walls, or
3. Ephedrine hypodemically 3-4 gr. for the same purpose

III. Adjuncts

1. Oxygen by nasal catheter or tent
2. Insulin in appropriate doses to help utilization of glucose
3. Attention to fluid and chlorid needs.

THE MISSISSIPPI DOCTOR

The Journal with a vision, the delivery of modern medicine to the masses at less cost to the individual and more profit to the practitioner. The champion the small hospital, the hub around which this service must be built.

W. H. ANDERSON, M.D., *Editor and Mgr.*
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"There is a time and a season for everything." The time is propitious and the season is now here to pay your medical dues for next year. Let us be thankful for the blessings of organized medicine in the past. Let us start the new year right by paying our dues during the month of December. The very least any practitioner should think of doing for organized medicine is to pay his dues, to pay them promptly and to do it cheerfully. There is no profession on the face of the earth that offers such a big and broad field for service as does the practice of medicine. No profession has made more rapid progress than that of medicine. Organization and cooperation have added speed to the progress. For continued advancement we need to keep our organization in working order. For the dangers that confront us we need a fit organization. In order to protect the public and to render the service it needs we must have organization. A medical organization will not run without a little expense money. The patriotic doctor should be willing to do his part. In Mississippi we should have five hundred more members, not lay members, but paid members. Of course the state association is not all it might be. Our attendance is too low. There may be some fault with some leaders, but the way to help this situation is for every doctor to become an active member of the association, to attend the meetings and to take an active part. Help your secretary, help your local society, help your state secretary and state association, help yourself and the people you serve by paying your medical dues in December for next year.

:o:

Dr. Maxwell E. Lapham has concluded his course of lectures in Mississippi after spending more than a year with us. Dr. McCord, of Atlanta, gave us our first course. Dr. Lapham is safe, sound and conservative. He knows his subject. He worked with the doctors of the state. In addition to much valuable information the profession is now more obstetrical minded. The field has been greatly neglected in many ways. The mid-wife prices have been hard to overcome. The average man will mortgage his last cow to pay a hundred dollars for a simple appendix and then have a mental abortion at a bill of twenty-five dollars for nine months' advice and twelve hours time on a delivery—not that the former should be less, but that the latter should be more. More and better obstetrical service must be given the average mother of the small town and rural community. The practitioner must bring the well trained nurse in as a helper. The old idea of waiting several weeks to repair a laceration is not sound. It gets no better results; it is very expensive, and further more, it is never done. Dr. Lapham has helped to give the profession in Mississippi the vision and it will find the way.

:o:

You will note the complete program of the Mid-South Post-Graduate Medical Assembly which will meet in February, in the Peabody Hotel.. The program is unique and outstanding. It covers the field of medicine and surgery in a four-day course by the outstanding authorities of North America. The Mid-South has shown the way. Others are now following suit.

:o:

Plans are under way to combine the papers of the Mid-South into book form and have it off the press in a short time after the meeting—that is, if enough men are interested in it.

Dr. Hugh Gamble had an exhibit at the Southern Medical in Baltimore that was a credit to him and to our state. It was entitled "The Open Wound Treatment of Peritonitis." He had a series of transparent photographs, some of them in natural colors, illustrating important points in the surgical and after treatment of peritonitis following appendicitis, and then a moving picture, all in natural colors, which illustrated the procedure in detail. The outstanding feature of his work is the prevention of anaerobic infections of the abdominal wall, this infection having been found to be the cause of many deaths following operation. His plan is to suture the peritoneum only, leaving a drain or two in the abdominal cavity. The muscular and cutaneus layers are left open to the air until suppuration ceases. Disruption of the wound is prevented by stay sutures of wire on large bone buttons. By this method he has been able to reduce mortality from diffuse peritonitis from the usual twenty-five to thirty per cent to one and one-half per cent.

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The general public session of the Southern Medical Association in Baltimore held at the Lyric Theatre on Tuesday evening, Nov. 17, was most interesting and instructive and was well attended. We consider it a big step in the right direction. We congratulate Mr. Loranz on this constructive idea. A meeting of this type makes a happy contact between the medical profession and the public. The speakers were Dr. Johnathan C. Meakins on "Heart Disease Versus Longevity," Surgeon General Thomas Parran Jr., "Syphilis as a Public Health Problem;" Dr. Irvin Abell, "The Role of Surgery and Hospital in Fighting Disease;" and as an able climax "Society's Debt to the Doctor" by Rev. Alphonse M. Schwitalla. The laity needs more reliable medical information. This program made a start in a big way.

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Our meeting at Tupelo on Dec. 15 will be one of the best held in the state this year. Dr. O. S. Warr, of Memphis, is the visiting essayist. He always gives a good paper. His information is always reliable, and he expresses it in terms that can be easily understood. We are delighted to have him. It is hard to find a town that can entertain like Tupelo. Dr. Stacy has given us some of the best programs this year the association has ever had. Dr. Dorsey has presided as president with ease and efficiency.

The percapita distribution of funds for the indigent sick is a big step forward. The law providing this can be improved upon somewhat, perhaps, to make it easier of application. This plan helps to give us a good basis upon which to build a more serviceable medical system. We should have a central hospital located at a central point well equipped in every way as a clearing house for the more complicated cases, the cripples especially. With this hospital and the other splendid ones in Jackson, the Mississippi State Hospital and the Sanatorium, we could have an internship that would be one of the very best to be found in the south. We should go forward and complete our system.

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We congratulate Dr. Henry Boswell on securing a well trained chest surgeon for the Sanatorium. Surgery is now a very important factor in pulmonary tuberculosis. The Sanatorium is now well equipped to be the educational and teaching center for the rest of the state. The next move is to have a wing in all the small hospitals of the state for tubercular patients. The complicated cases can be sent to the Sanatorium, the more simple kept at home.

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And now we have the New Orleans Graduate Medical Assembly to hold its first session March 8, 9, 10 and 11, 1937. A partial list of the speakers is already announced. The program is to be a strong one. New Orleans is a great medical center. It has a fine medical atmosphere. It has many hospitals, fine hotel accommodations, and a rich historical background. This post-graduate course will be well attended, no doubt.

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Everything else being equal, please trade with our advertisers. You will be just as well off and it will make it much easier on the editor who has tried mighty hard to give you a good journal. Some of our amen corner members need a little medical patriotism mighty bad, need some of the good neighbor spirit in their souls that President Roosevelt has preached so much about.

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Medicine is on its way to the rural communities. Some of the best surgery now is to be found in the small hospital. Medical decentralization is on its way. *The Mississippi Doctor* has preached this medical gospel of necessity for twelve long years, preached it persistently and consistently.

Dr. Willis Walley now has associated with him in his Medical and Surgical Clinic at Jackson, his son, Dr. Cecil Rhodes Walley. He took his B.A. degree at the University of Alabama, his M.D. at Emory University, and has now completed his internship at the I. C. Hospital, Chicago, Ill. The medical fraternity, we are sure, is glad to welcome this well-prepared young man into its fold. Cordial good wishes to him.

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Surgeon General Thomas Parran Jr., advocates a Wassermann test for every pregnant woman. He is right. It can be done. Really and truly every well equipped clinic should do its own Wassermanns. It is not so hard and it is not very expensive. The rank and file of the physicians must have this done or do it before we can get very far with the problem in which General Parran is so much interested.

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Two thirds of the fractures occur in the small town and rural community. The indications are that the percentage will increase as highways and air lines multiply. Hence the importance of better equipped hospitals out on the commercial firing lines and of better trained medical and surgical staffs.

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You will read with much interest the paper of Dr. Seale Harris on the relation of alcohol to automobile wrecks and deaths. Along this line the medical profession has a big responsibility. It should do its part in a noble way. We thank Dr. Harris for preparing this paper for *The Mississippi Doctor*.

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We deeply appreciate the full page ad of William P. Poythress & Company, Inc., Richmond, Virginia. We trust that this may be of mutual benefit. Please give due consideration to this company.

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Secretary Dr. A. F. Cooper has completed the program of the Mid-South. You will see it in full in this issue of the journal. It is one of the best, if not the best we have ever had. We predict the largest attendance we have ever had.

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Mississippi has about all the hospitals it needs now. It needs to improve and support those it has. We need a big improvement in clinics. Well organized and well equipped clinics are essential for the practice of preventive medicine.

We congratulate Dr. Lawrence W. Long on being elected president of the Central Medical Society. It will continue to go forward under his leadership.

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The next meeting of the Southern Medical Association goes to New Orleans. It will be well cared for there. It is a great medical center.

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Every physician should subscribe for Hygeia for his waiting room. He should encourage his clientele to subscribe for it and read it.

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Read all the papers in this issue and be convinced that no journal is superior to *The Mississippi Doctor*.

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Next month we will have a fine paper by Dr. Oscar Bethea, of New Orleans, on the Heart.

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President Garrison has been very active and very effective in his campaign for membership.

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Every practitioner can use a registered nurse to a big advantage in his practice, to himself and to his clientele.

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Syphilis is the parrot of all the diseases in the catalog of medicine, may simulate any of them.

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This is the machine age in medicine and the demand for trained operators is greater than ever before.

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The spirochaete pallida wilts like a morning glory when it is deprived of its human moisture.

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Dr. Underwood's educational campaign over the radio is an important step forward.

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We deeply regret the illness of the Medical Sage of Amory, Dr. G. S. Bryan.

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Once, again, your associate editor will deviate from his custom of giving a semi-historic sketch of the doings of the Mississippi State Medical Association. The reason for this is the fact that he has been "hors du combat" for about a month because of sickness. The financial loss resulting from a month's sickness is a small matter when compared with time lost from reading and study. One can recoupe financial loss by readjustment of his budget, but lost time can never be reclaimed. I have always tried to keep a full schedule for each separate day—hence the loss of a month is nothing short of tragedy. Of course there are compensations. The friendly interest shown by one's doctor friends—the flowers sent by lady friends—the tender ministrations of kind and skillful nurses and concern of members of one's family go a long way towards the balancing of accounts. Even so, I would have the readers of *The Mississippi Doctor* to know that they were constantly kept in mind. During this month I lived over many happy moments of fraternal association with them. So the Thanksgiving season was, truly, a time of thanks for me. And not least among the things for which I gave thanks was the fact that not once have I ever given place to hatred or jealousy towards a member of my profession. The time set for universal thanksgiving is past —Yuletide comes on apace—soon we must face a new year. But every day is a new day with its new opportunities, obligations and responsibilities. I trust that we may, all of us, face these with faith and courage and may acquit ourselves like men.

On Tuesday, Dec. 15, the Thirteen Counties Medical Society will convene in its fourth quarterly meeting for 1936. This meeting will be held in Tupelo. It will, of course, be a good meeting (our meetings are always good). They are good because we always have good programs—they are always well attended and, above all, the best of fraternal feeling and cooperation always prevails. I hope that many of our friends outside our jurisdiction may honor us by their presence. I will, personally, guarantee them a hearty welcome and it must not be forgotten that the Tupelo doctors know exactly how to entertain. Come one, come all!

G. S. B.

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Recently a salesman called on us carrying his stock of surgical instruments and supplies with him, offering delivery in our office. We know nothing of the quality of his merchandise, not having inspected it, nor are we acquainted with the reliability of his firm. We do know, however, that we owe our surgical supply advertisers who help make possible the publication of The Journal reciprocity to the degree that we patronize them, other things being equal. We so advised this salesman and were a bit crestfallen when he told us that in his travels over the state, he had not met with this cooperation from a single other physician. We feel that as a matter of sound business, members of the Arkansas Medical Society should invariably patronize Journal advisers if this is at all possible. Our advertisers have shown the commendable desire to work with us in the publication of our official Journal; without their assistance, The Journal could not be printed. Nonadvertisers are apparently not similarly interested in our activities. As a matter of fair play, will you help us to give you a better Journal by establishing a policy of buying from our advertisers?

The above from the Journal of the Arkansas Medical Society is full of good sense and sound reason. Any member of a medical society should cooperate to this extent to help the journal that is trying to help him. We should appreciate our advertisers and we should give them our business, other things being equal.

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PROGRAM AND INVITATION

Of the Northeast Mississippi Thirteen Counties Medical Society, fourth quarterly meeting, Tuesday, Dec. 15th, 1936, to be held at the First Methodist Church, Tupelo. Following the scientific program the visiting doctors and their wives will be entertained in the dining room of Hotel Tupelo by Thomas-Kincannon-Elkin Drug Co. and Lee County Doctors.

House called to order by President, Dr. Dorsey. Invocation by Rev. H. F. Brooks. Reading and adoption of minutes of last meeting. Syphilis in Northeast Mississippi by R. B. Warriner, Corinth; Discussed by Dr. W. H. Cleveland and Dr. R. E. Honnell. "The Treatment of Pneumonia with Special Reference to Specific Therapy" by Dr. O. S. Warr, Memphis; open discussion. "Amoebic Dysentery in Northeast Mississippi" by Dr. R. B. Caldwell, Baldwyn; discussed by Dr. F. J. Underwood and Dr. Bernard Patrick. "Safe Gynecological Surgery" by Dr. M. Q. Ewing, Amory; discussed by Dr. V. B. Philpot and Dr. R. D. Kirk, Jr. President's Address. Election of Officers. Business Meeting.

LADIES' AUXILIARY

Annual meeting Woman's Auxiliary to Thirteen Counties Medical Society. Luncheon—honoring State President, Mrs. Adna Wilde.

Address by Dr. H. F. Garrison, President State Medical Association.

Will meet at hospital at 1:00 p. m. and go to Country Club for luncheon.

MID-SOUTH PROGRAM

Dr. F. A. Willius (Med.) Rochester, Minn. Dr. Mont R. Reid (Surg.) Cincinnati, Ohio. Dr. Harry C. Solomon (Neuropsych.) Boston, Mass. Dr. Ramon Castroviejo (Ophthalmol.) New York, N. Y. Dr. Thos. G. Orr (Surg.) Kansas City, Mo. Dr. Harvey B. Stone (Surg.) Baltimore, Md. Dr. Floyd E. Keene (Gyn.) Philadelphia, Pa. Dr. E. R. Long (Tb.) Philadelphia, Pa. Dr. Russell L. Haden (Med.) Cleveland, Ohio. Dr. Hugh Cabot (Urol.) Rochester, Minn. Dr. J. C. Beakins (Med.) Montreal, Canada. Dr. C. H. Crego Jr. (Orthoped.) St. Louis, Mo. Dr. A. Graeme Mitchell (Ped.) Cincinnati, Ohio. Dr. A. F. Hartmann (Ped.) St. Louis, Mo. Dr. Cyrus C. Sturgis (Med.) Ann Arbor, Mich. Dr. Gabriel Tucker (Bronchoscopy) Philadelphia, Pa. Dr. E. L. King (Obst.) New Orleans, La. Dr. J. E. Moore (Syph.) Baltimore, Md. Dr. Geo. W. Kosmak (Obst.) New York, N. Y. Dr. E. M. Seydell (E.N.&T.) Wichita, Kansas. Dr. Jas. H. Hutton (Med.) Chicago, Ill. Dr. A. C. Ivy (Physiol.) Chicago, Ill. Dr. L. A. Buie (Proctol.) Rochester, Minn. Dr. S. D. Kramer (Poliomyelitis) Brooklyn, New York.

TO THE MEMBERS OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION

Gentlemen:

Allow me to extend to you my best wishes for a happy and prosperous new year!

It has been my privilege and pleasure to attend many medical societies during the past year. I recently attended the meeting of the Southern Medical Association at Baltimore, Maryland. We had a most profitable and interesting meeting. It was my privilege especially to enjoy a meeting, which I called of the presidents and presidents-elect of the state medical associations in the Southern states. We discussed many phases of medical economics and other problems of vital interest to the medical profession throughout the South.

I visited the pediatric department of the principle hospitals in Baltimore and in New York City. It was my privilege to see the high-class work that was being done in these hospitals by the leading physicians of our nation. The number of patients, and the many facilities for extensive research in these hospitals and clinics, are of course, greater than ours. However, I am gratified to say that many physicians of Mississippi are the equal of any, and are doing as high-class scientific work, that can be found in this or in any other country.

I read a statement of some eminent writer a few months ago, in which he stated that it was his opinion, that we would be out of the depression some six months before we realized it. I believe that we can mark September, 1936, as the time of our coming out of the depression, and I fully believe that we are now definitely out of it. If it takes this to convince you, just look all around you and find all the business houses crowded to the doors. In fact, in most cases, it is difficult to employ sufficient help to take care of the people who are crowding these stores. I found this same condition of business activity throughout the entire East. All the hotels, theaters and railroads were crowded almost to standing room.

Now permit me to make this personal appeal to every member of the Mississippi State Medical Association. Since these times are now good, finances are in much better condition. Let each of us consider it our personal duty to go out and get the eligible physicians in your immediate territory to become members of your local and state medical associations. Just a little personal work in this regard is most effective and in this manner, we can increase our membership even greater than it is at present.

As a final word, allow me to congratulate you and the other members of the Mississippi State Medical Association that we can now boast of having the greatest percentage of membership in our state association, than any state in the South, and I know that you will feel gratified to know this. I assure you that it is a great pleasure to me.

With every good wish for the coming new year and assuring you of my desire to give my very best to the medical profession of this state, I am,

Sincerely yours,
HARVEY F. GARRISON, president,
Miss. State Medical Association.

It seems . . . that, while the Negro is no more likely to develop tuberculosis, he is more likely to become seriously sick and die if he does develop it. It is suggested by Opie that tuberculosis, running an acute course in such people, leads to dissemination of large numbers of tubercle bacilli.—Amberson.

ALONG THE MEDICAL HIGHWAY

NEW ORLEANS POST-GRADUATE MEDICAL ASSEMBLY

The plans for the New Orleans Post-Graduate Medical Assembly to be held March 8-11, 1937, are being pushed actively and energetically. The officers are working diligently and faithfully, so that the magnificient scientific program is virtually completed.

A preliminary program has been sent to most of the doctors in the far South. To those who have not by chance received these programs or who have not read them it might be said that the list of speakers is made up of many men distinguished in the medical profession. Dr. Ralph A. Waters, Professor of Anesthesia at the University of Wisconsin Medical School, will discuss anesthesia. In the ear, nose and throat field the talks will be given by Dr. Albert C. Furstenberg of the University of Michigan Medical School. One of the best known men in gastro-enterology, Dr. Anthony Bassler, will deal with gastroenterologic subjects. In gynecology Dr. George W. Ward, of New York, will present several interesting papers. Dr. Russell Cecil, Professor of Medicine at Cornell University Medical College and author of a well known textbook, will present the medical features of disease. He will be joined by Dr. George M. Piersol, Professor of Medicine at the Graduate School of the University of Pennsylvania and an editor of distinguished reputation. The monumental work which has recently appeared in thirteen volumes, "The Cyclopedia of Medicine," was prepared under his editorial supervision. The placing of Dr. Piersol on the program is one of several additions that have been made by the program committee.

In neurology Dr. Lewis J. Pollock, Professor of Nervous and Mental Diseases, Northwestern University Medical School, will give instruction in his particular specialty. The Professor of Obstetrics and Gynecology at Cornell University, Ithaca, Dr. H. J. Stander, will be the representative on the program to discuss obstetrical problems. Ophthalmology will be represented by Dr. Clifford B. Walker of the University of Southern California School of Medicine. One of the truly great orthopedic surgeons, Dr. Robert B. Osgood, formerly Professor of Orthopedic Surgery at Harvard, will have several papers on this branch of surgery. Dr. John A. Kolmer, well-known for his modification of the Wasserman reaction and the author of several books, will discourse on the relationship of pathology to medicine. In pediatrics Dr. Julius Hess of the University of Illinois College of Medicine and one of the best known pediatricians in the country, will give several talks on the care of the infant.

A representative of the U. S. Public Health Service and National Institute of Health, Dr. Rolla E. Dyer, is extremely well qualified to talk on his subject, preventive medicine. The same may be said of Dr. Eugene P. Pendergrass of the Hospital of the University of Pennsylvania School of Medicine, a delightful talker and an able student of radiology. Dr. William Babcock, Professor of Surgery at Temple University School of Medicine, needs no introduction to the medical profession. The author of one of the outstanding surgical textbooks, he is a man who presents his subject clearly and intelligently. Surgery will be further represented by Dr. Hugh Trout, of Roanoke, Virginia, one of the most prominent surgeons of the South, while Dr. Meredith Campbell, of New York City, will discourse on urologic surgery.

Reviewing this list of speakers it will be difficult indeed to find more perfect representatives of the various divisions of medicine in this country, both as men of renown and teachers of quality. The information and instruction that these men will give will be undoubtedly unequaled by any group during the coming year. These men will present not only formal lectures but will enter into round-table discussions, will take part in symposia and will give clinical demonstrations.—New Orleans Medical and Surgical Journal.

HISTORICAL OUTLINE OF THE INTERNATIONAL COLLEGE OF SURGEONS

It was felt by a number of eminent surgeons in this country and foreign countries that it would be desirable to have an international college of surgeons, whose main object would be to raise the standard of surgery in all countries by offering degrees to those who succeeded in passing a singularly rigid but practical examination in surgery.

The Foundation Committee was formed in Geneva. Professor Arnold Jirasek, Head of the First Surgical Clinic and Department of Surgery at Karlov University of Praha (Prague), Czechoslovakia, was appointed President of the International College of Surgeons. Prof. Jirasek is also President of the International Post-Graduate Course Hospital Association and is a member of the leading surgical societies of Europe.

Prof. Albert Jentzer was appointed Secretary-Treasurer General for Europe. Prof. Jentzer is one of the most outstanding figures in European Surgery and is Head of the Department of Surgery at the University of Geneva. He is also Surgeon-in-Chief of the Cantonal Hospital (a hospital of 2000 beds.)

Dr. H. Lyons Hunt, member of the Royal College of Surgeons of Edinburgh, was appointed Director-General. During Dr. Hunt's long term as President and later as Director-General of the American Medical Editors' and Authors' Association, he became exceptionally well informed regarding the qualifications of leading authorities on surgery. It will be remembered that the Association was founded in 1869 by Dr. Nathan Davis, father of the American Medical Association. Succeeding Dr Nathan Davis, such men as Theophilis Parvin, Horatio Wood, George Gould, George Piersol, Thomas Stedman and other men of fame guided the destines of this Association.

Following the appointment of these Officers of the International College of Surgeons by the Foundation Committee an outstanding surgeon in the different countries was invited to act as National Regent, to recommend and pass on territorial or State Regents. In this Country Dr. Dean Lewis, Professor of Surgery, Johns Hopkins University, Baltimore, Maryland became a National Regent.

Among the men who accepted the responsibility of State Regency in this country have been Dr. Donald Balfour, President of the American College of Surgeons, Professor of Surgery, Mayo Foundation, University of Minnesota, who became State Regent for Minnesota. The late and very lamented Dr. Tate Mason, the President of the American Medical Association, assumed a Regency for the State of Washington and was most helpful in the organization of the College.

As the number of Regents and appointed Fellows throughout the world is limited by the Constitution to one thousand, it is obvious that the International College cannot invite all members of National Colleges of Surgeons, or outstanding surgical societies. Plans, therefore, are being worked out between the International College and some of the National Colleges and outstanding surgical societies to have these Colleges and Societies appoint groups of their own surgeons to represent them in the International College. A suggestion made by the Royal Australasian College of Surgeons that appointments in Australia should be made through the Royal Australasian College met with approval by the Officers of the International College.

This plan will probably be inaugurated in other countries where National Colleges and outstanding surgical societies make the same offer.

The appointment of Fellows in the various countries has and is being confined to those of such outstanding ability and reputation that there can be no question as to their worthiness for the honor. Subsequent Fellowship will be granted after a rigid, though practical examination. Members of the College will be selectd on the same basis. No amount of influence or money will secure appointment for any surgeon who has not the highest qualifications.

No member of the College, whether Specialty Regent or Fellow, has been appointed without the approval of the National or the State Regents.

It has been decided to have no set dues on account of the varying economic situations in the different countries and among the men worthy of inclusion in the International College all payments are on a purely honorarium basis and are entirely voluntary.

BOOK REVIEW

Have you purchased your new *"Daily Log"* for 1937? The complete, handsomely bound and charted one which we know as Dr. Colwell *Daily Log,* sold by the Colwell Publishing Co., of Champaign, Ill., is as neat and compact as you will find on the market. Each patient which consults or receives treatment in your office is entered on the date prescribed, with all the details of services rendered, charges, etc. At the close of the year your *Daily Log* is complete and ready for quick reference. Price: $6.00. For the catlog system, Colwell Publishing Company also offers ledger cards for the individual record, size 4x6 inches, 500 cards at $4.25, 1000 cards at $7.50.

HUGH T. BEACHAM

Dr. Hugh Beacham, eldest physician son of the late Dr. W. D. Beacham, of Hattiesburg, Miss., was signally honored at the recent meeting of the American College of Surgeons in Philadelphia, at which he received the distinction of being placed on the honor roll of that organization. Each year the case records of the men who are to be initiated into that surgical body are carefully perused and the five persons submitting the records adjudged the best are rewarded by having their names inscribed upon the Honor Roll of the College of Surgeons. This year there were 518 initiates from the United States and Canada, and Dr. Beacham was one of the five surgeons attaining honor roll membership. He is the second surgeon residing in New Orleans ever to attain the honor.

Dr. Beacham was graduated from the University of Mississippi, where he completed the course of the first two years in medicine, in 1925. He received his M.D. from Tulane University, where he made an excellent record in 1927. After interning for two years at the Charity Hospital in New Orleans, he was resident urologist at that institution for a similar period of time. In 1931 he received a Master of Science in Surgery degree from Tulane, and entered private practice in New Orleans specializing in genito-urinary diseases. He is assistant professor of urology at the Louisiana State University Medical Center School of Medicine. At the present time he is president of the New Orleans Urological Society, and is on the visiting staffs of the Charity Hospital, Southern Baptist Hospital, and the Touro Infirmary. Mississippi is very proud of the Beacham boys. Their father was loved and revered by the profession. This marked success brings much joy to the fine and beloved mother.

FREDRICK A. WILLIUS

Dr. Fredrick A. Willius was born Nov. 24, 1888, at St. Paul, Minn. He received the degrees of B.S., M.D., and M.S. in Medicine from the University of Minnesota. He entered The Mayo Clinic as an assistant in general diagnosis and electrocardiography in 1915, and is now head of the section on Cardiology. He is a fellow of the American College of Physicians, and a member of the American Medical Association, the American Congress of Internal Medicine, the American Heart Association, the Minnesota Heart Association (president in 1925), and the Central Society for Clinical Research. He is also a member of Phi Rho Sigma and Sigma Xi.

Dr. Willius will apear at the Mid-South.

MISSISSIPPI STATE MEDICAL ASSOCIATION
and
COMPONENT SOCIETIES

Further Report on Intra-Nasal Ionization in the Treatment of Hay Fever, Food Allergy and Asthma*

H. L. WARWICK, M.D.
Fort Worth, Texas

During the past four or five years I have presented several papers on the subject of the treatment of hay fever and its allied conditions by ionization, and, now that nine years have elapsed since I first began this interesting work of intranasal ionization, I feel that I can speak with both the assurance and authority which only can come from the many cases treated, the years that intervene, and the close records—with repeated examinations—and reports both from my own files and from colleagues who have interested themselves in this work. There has been some criticism from those who do not understand. Some of this has been constructive and helpful, while some has plainly shown ignorance and prejudice and a woeful lack of knowledge of the underlying principles involved.

In the earlier papers I have paid attention to, and discussed, the technique employed; told of the number of cases treated at that time, and the results obtained. Since the publication of these cases many men have written on this subject, most of them following my technique and method, and a few of them substituting their own ideas or the ideas of others. Therefore, in this paper I shall attempt to explain and discuss the following phases.

a. Why three-metal electrode and electrolyte of the salts of the three metals is superior to zinc alone.

b. Why it is difficult to find some of the elements in the electrolyte, by using a simple test.

c. Why glycerine, as advocated by some, is objectionable as part of the electrolyte.

d. Show what takes place within the nose during passage of current.

e. Why continuous, or direct current, such as obtained from a motor generator is superior to battery current, or current obtained from other sources.

Since observers, despite diligent training, are rarely absolutely accurate and are sometimes misled by expectation or desire, the scientific method makes provision for repetition. It is not sufficient that the investigator alone should repeat his own experiments, but they must be repeated by others. With this sound scientific fact in mind, I have not only repeated my technique a great many times, but my method has been employed by many of the country's foremost rhinologists with results that closely confirm my observations as originally reported. These observations which are so similar to mine, were made under conditions of treatment identical with my method. The technique of ionic desensitization of the nasal membrane, as employed by some other rhinologists and physiotherapists, differs in some essential details and so the cases treated by them are not considered in this analysis of cases treated by my technique.

In my earliest work I began using a zinc metal electrode and zinc sulphate solution as the electrolyte, after having tried and discarded other metals too numerous to mention. I soon found that zinc alone, while relieving the symptoms, was not entirely satisfactory, in that the reaction following the treatment was very severe; the nasal passages remained turgescent and blocked up for days, sometimes weeks, only to be followed by the formation of multiple areas of infection in and about the nose. It was then that tin was added to keep down this infection and cadmium added as an astringent to shorten the time of the post-operative occlusion. This infection that came about, or followed, the use of zinc alone as the anode metal was probably because the film or coagulated cell protein separated easily from the walls of the nasal cavity and left exposed the submucous tissue which is highly sensitive to irritants. The use of tin serves to cause the cell proteins to coagulate in small particles and adhere together in a tenacious film that remains in the nose until there has formed a new mucous membrane which not only protects the submucous tissue from bacterial invasion, but also is immune to the allergic action of foreign proteins.

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*Read before the Section on Eye, Ear, Nose and Throat at the Sixty-Ninth Annual Session of the Mississippi State Medical Association, Greenville, May 6, 1936.

Naturally, the electrolyte should be a solution of the salts of the metal electrode which, in this case, would be a solution of the sulphates, or chlorides, of zinc, tin, and cadmium, made up in a strength not exceeding two per cent of the metallic salts and in the proportion of 85, 10, and 5 per cent. This solution, as an electrolyte, is the one I have used in the case reports that follow.

Now tin, considered as an "ous" salt, such as stannous chloride or stannous sulphate, is most unstable in this form and readily changes to an "ic" salt. The simple test, as you well know, for tin in its "ous" form, such as stannous chloride, is its reducing effect upon mercuric chloride, bringing down a heavy black precipitate of mercury as mercuric chloride, and if one should test the ionode solution for the presence of stannous chloride, or sulphate, within the first few days after the solution has been made, tin would be readily found to be present in its "ous" form, but if, after a lapse of a few days—or longer—the stannous salt has changed to a stannic, following a well known law of chemistry, the test then becomes much more difficult and complicated, requiring the use of hydrogen sulphide gas as the reducing agent. This explains why some have stated that tin is not present in the electrolyte made by my formula.

Some have demanded that glycerin be added. The addition of glycerin to this electrolyte is entirely out of place because it greatly increases the electrical resistance of the electrolyte and furthermore it would have to be freshly prepared before each treatment. The glycerin would precipitate the zinc after it was a few days old and the ionic concentration of the zinc would be cut down and the solution would not be efficient as an electrolyte.

There are others who have suggested that the electrolyte be made into a jelly of gum tragacanth and the nose filled by injection with a syringe. I gave up this idea because of the inability to secure the necessary pressure as obtained by packing and also that contact in the post-nasal space could not be secured, leaving that important area untreated.

A question that is frequently asked: Just what takes place within the nose during the passage of the current from the positive side, which is the electrode wrapped in cotton, through the cotton packing and into the nasal mucous membrane, which is the negative side of the machine? It must be remembered that when the current is on the entire body carries a negative bias and not only is the arm, to which the electrode is attached, negative, but all tissue up to and including the nasal mucous membrane is on the negative side. We must remember that proteins are placed first as the characteristic elements of all living matter. Second are mentioned the salts, but not as things which are merely mixed into the protein, but as materials which were originally united with the protein. Into this is put the water, but not as a solvent for the protein-salt complex, but as a material dissolved in the latter. This membraneless hydrated protein-salt compound is the biochemists' unit of living mass. Therefore, in order to understand what takes place when the ions of a heavy metal come into contact with the nasal mucous membrane or other living tissue, it is necessary to know something of the physical chemistry of cell proteins. If we were to endeavor to interpret the behavior of these proteins solely in the light of preconceptions derived from the study of the chemistry of the metals for example, or the simple organic compounds, we would find that the behavior of the proteins displays merely a bewildering variety of inconsistencies.

All life processes take place in colloidal systems, as all active cell proteins are colloidal. This means that the essential cell proteins are present as ultramicroscopic particles, each of which bears a charge of electricity derived from the salt present. The nature of this charge depends upon the reaction of the medium in which the particles are dispersed, that is, the hydrogen ion concentration. When protein colloids are in an acid medium they are electropositive, that is, they move toward the cathode on electrolysis; when the reaction is alkaline the colloids are electronegative and move to the anode. This behavior of cell proteins has been explained by Whetham by assuming that at the surface of the colloidal particles there exists a double electrical layer of the ionized salt, one ion of which is combined with the protein and the other free to give to the particle its electric charge.

When soluble inorganic salts, such as those with which we are dealing in my method of treatment, are dissolved in water they become ionized, that is, the two radicals of the salt become electrically charged. Thus with zinc sulphate, $ZnSO4$, there are formed ions of zinc, Zn, each of which bears two positive charges of electricity. These are called the cations because they move toward the cathode, or negative electrode. Also there are formed ions of the sulphate radical, SO^4—, each bearing two negative charges; they move to the positive electrode, or anode, and therefore, are called anions.

It is this distribution of electric charges, or ions, that is most essential to success in this form of therapy, yet it seems to be most thoroughly misunderstood and mis-stated by some who have recently written on this subject.

When zinc sulphate is dissolved in water the molecule is divided into two parts: one, the zinc cation, carries two charges of positive electricity; the other, the sulphate radical, has two charges of negative electricity. The zinc ion is not present as metallic zinc. Metallic zinc and ionic zinc are not synonymous, and zinc in the metallic form would immediately react with the H^2SO^4 formed at the electrode, if it were possible for it to be formed on dissolving zinc sulphate in water. When a direct current is passed through this solution the zinc ions migrate toward the cathode and the sulfate ions toward the anode. In the condition which we are considering, namely, ionic therapy of the nasal membrane, the zinc ions do not reach the cathode which is attached to some part of the body, but react with the charged colloids of the mucous membrane so as to relieve them of their charge and thus precipitate them out.

This brings us to the question of the action of the current other than to transport therapeutic ions. As the membranes of the nose are copiously supplied with nerve fibers from the sphenopalatine ganglion, a consideration of the distribution of nerves from this ganglion will show what areas are affected by a current picked up by its nasal branches and carried to it for a re-distribution. Of particular significance in this connection is the removal of irritation which affects its several branches. In the treatment of hay fever these effects are manifested by cessation of excessive lacrimation, due to irritation conveyed by secretory fibers of the lacrymal branch; by the decrease of swelling of the turbinates which are supplied with a vasomotor branch and by elimination of itching in the roof of the mouth and post-nasal space, which receives the palatine nerves and pharyngeal branch from this ganglion. It is obvious that a continuous current passing through these nerves would not be as satisfactory as one in which there is a sharp interruption of many makes and breaks per second of the current. Turrell believes that "the very gist of ionization therapy is based upon this fact; the therapeutic action of interrupted current (as obtained from a motor-generator) is mainly due to the recurrent hydrogen ion concentration which results from the intermittency at each make and break; at each sudden variation in their strength a concentration of ions occurs throughout the tissues. Anesthesia is probably due to the repeated stimulation of the pH to sensory nerves until they no longer respond to stimulation." Through its action on the sphenopalatine ganglion and its anastomoses with other sympathetic ganglia, I believe we can assert that the procedure is not entirely local in its actions, but in this manner it is also systemic. For example, the sphenopalatine ganglion derives its sympathetic root from the carotid plexus by way of the deep petrosal nerve and thence through the superior cervical ganglion and the jugular ganglion of the vagus it has connection with posterior pulmonary plexus and the musculature of the bronchi. The relief of dyspnea in asthmatic patients suggests that these nerves are affected by the current during the treatment or by removal of a focus of irritation by desensitization of the nasal membrane.

It has been asked why I insist upon using a current from a motor generator instead of that obtained from batteries, rectifiers, and other improvised sources. In the first place, a continuous current, as may be secured from a set of dry cells or storage batteries, will produce a hydrogen ion concentration momentarily at the establishment of the current through the body in the neighborhood of the negative pole which, in this case, is the mucous membrane of the nose. This concentration continues to decline until the break occurs when there is another momentary concentration in the opposite direction. This, in effect, becomes more of an electrolysis; more like the destructive action of a cautery. There is an increase in pain as the current continues to flow from the batteries and there is an absence of the anesthesia produced by the rapid make and break of the current obtained from a motor generator. It is true that if I provide additional apparatus to make and break this current rapidly, I may produce effects similar to a motor generator out-put, but we must remember that the out-put from a battery of dry cells is constantly declining until finally the batteries become exhausted and must be frequently renewed. This is especially true if we were to attempt to add additional apparatus to make and break. Now, the ionizing current from a motor generator that is constant and uni-directional, that has the fine make and break which occurs as each bar of the commutator makes contact with the brush, thus finely interrupting the out-put as rapidly as 500 times per second, that has further been filtered before being delivered to the patient, has the advantage of producing the anesthesia mentioned above, producing a concentration of ions at each make and break and having a constant, non-declining rate of flow: safe, ground-free, no electrical sensation, and is ideal.

The Burdick Corporation, manufacturers of this equipment, is now compiling statistics covering the use of this method of treatment. Each man who has been using it has been asked for a survey of his records and in a short time a resume of the figures will be available upon request. Each contributor may identify his own report in the photostat copy which he will receive by the number assigned to him.

Let us for a moment consider the circumstances which might interfere with the treatment proceeding in a satisfactory manner. First, the nasal membrane must be examined to ascertain if all its area can be covered by the packing which holds the ionizing solution during the passage of the current. In cases with a deviated septum, surgical correction must be made before satisfactory results may be expected from nasal ionic therapy. Then, it is routine in my office to radiograph the sinuses, removing any polyps that might be in the nasal passages which would interfere with the application of the ionic process. I also make a microscopic examination of the nasal secretions for eosinophiles. The presence of many eosinophiles substantiates the diagnosis of allergy, but the absence of eosinophiles does not mean the patient is not allergic for perhaps thirty minutes later you would be able to find the nasal secretions loaded with them.

It has been said that anosmia has occurred, or atrophic rhinitis, or sinusitis may be a sequella. This has never occurred in my experience and I frequently see those who received treatment as far back as 1927. I have had failures and have found it necessary to repeat the treatment twice, three, or even four times, but this has not happened often enough to cause me to discard the method. In some cases only the eye symptoms have recurred and this has been cared for by ionization of the eyes alone. There are some whose nasal passages were most difficult to pack and some who were treated out of season. (I do not offer ionization as a prophylaxis.) Some years the failures were greater than in other years. Last year's cases were particularly trying.

I have found that ortal-sodium, or sodium amytol, given before treatment and "cocain mud" (1 1/8 grain cocaine in a few drops of 1-1000 adrenalin) applied as you would for a submucous resection gives a perfect anesthesia. The postoperative discomfort, which usually lasts about six hours, can be controlled easily with a few capsules of codein and aspirin.

After nine year's work I still feel that intranasal ionization is the most satisfactory method of desensitizing the individual to pollens and foods, using an alloy of zinc, tin, and cadmium as an electrode and the salts of these metals as the electrolyte.

A safe, suitable direct current, which has previously been filtered, is best furnished by a special motor-generator.

Unless the patient is unusually hypersensitive, one treatment has proven sufficient, and some have remained immune since the first year I used this method.

No damage is done to the nasal membranes by the ionization treatment, as evidenced by laboratory examinations of specimens of tissue.

The reactions are not only local, but systemic.

Patients who have had the ionization treatment report they are less susceptible to colds afterward.

DISCUSSION

DR. E. LEROY WILKINS (Clarksdale): I want to add my word of thanks to Dr. Warwick for this paper, and in coming over to present such a paper to us. I am sure we are all very interested, and I am certain that I can not give you very much—can not add anything to his paper.

Just briefly, I am going to say that my experience has been very limited, because I had not done any allergy prior to the purchasing of a machine to do this work. After I had read all I could find, everything that Dr. Warwick had published, and discussed the matter with Alderman, I think it is, in St. Louis, and one or two others, I purchased the machine primarily to treat a member of my own family who had gotten very poor benefit from the ordinary pollen desensitization. This member of my family was my first patient, and if I never treat another patient my machine and the expense I have been to will be thoroughly justified, and I am perfectly satisfied with it. Two of the other patients that I have had, warm personal friends whom I treated with it, have been entirely satisfied. I have taken Dr. Warwick's work for what he said it was. I have not gone into the technical side of it; I have not investigated it, but I have just applied it as nearly as I could as he described it, and from a practical application I am more than satisfied with the expense my machine has been, and I am going to continue using it. Thank you very, very much.

DR. WARWICK (Closing): I wish to thank the section again and also Drs. Montgomery and Wilkins for their discussions. I am very glad to know that Dr. Montgomery has been taking sections from treated cases. This will furnish valuable statistics for the future. I would like to read his article on this when it is completed.

Answering your questions about the patients who have given the best results, nearly all of them have had pollen antigen treatment for years before they came to me but I am not able to say whether results secured from these patients were better than from those who had not had pollen antigen.

In those who have asthma, we have noticed that amost immediately after treatment they have a very severe asthmatic attack. In some of these cases I have given 50 c.c. glucose half an hour before treatment and I believe prevented, to some extent, the alarming asthmatic attack. For children under ten years of age I suggest a general anesthetic and in my limited number of cases I have used avertin and not ether, and I do not know whether it would be necessary to inject glucose; I did not use it when treating children.

You asked me about the treatment of allergy in the eyes alone. The manufacturers have not yet put on the market an electrode for use in the eye but I have made a few in my shop and the results have been very good from its use. The ionode solution must be diluted with eight parts of distilled water and the current strength should not exceed 3 milliamperes for ten minutes in each eye. The local anesthetic may be butyn, holocain, or whatever you prefer, and the patient instructed to keep his eyes open.

The Clinical Significance of Episcleritis*

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Affections of the sclera are usually divided into two groups depending on the depth of the involvement: first, scleritis, when this dense leathery structure is predominantly affected; second, episcleritis when the normal process seems to be lying between the sclera and conjunctiva. As this division of tissues is not clear cut, one inflammatory condition can, and frequently does, merge into the other with no perceptible line of demarcation. But, as Parsons remarks, "The distinction is convenient clinically, since they usually differ in the course they take."

Episcleritis may, therefore, be described as an inflammatory reaction situated between the conjunctiva and sclera, where the layer of loose areolar tissue is common to both structures.

Actual scleritis gives rise to a darkened raised nodule, which is quite tender on pressure, of long duration and marked after effects follow its subsidence. There are coincidently deep lesions of the uvea, such as cyclitis, iritis and choroiditis. While there is no actual ulceration, a thinning of the sclera is produced which gives a point of weakness, with subsequent bulgings known as "ciliary staphylomata."

For our present discussion, involvements of the superficial layer only will be considered. Fuchs described what he called "periodic transient episcleritis," following in the path of Hutchinson who had previously called a similar condition "hot eye." Both referred to recurring attacks of inflammation of the episcleral tissue, which produced a vascular injection, but without any secretion or hard infiltration. When the attack subsided no discoloration was left, nor other abnormal sequelae.

The striking association of this type of episcleritis with tubercular activity elsewhere in the body, was first impressed on me while working in the eye clinic of the Algemeines Krankenhaus of Vienna, during 1924-1925. We found that almost every young adult who was a growing child during the period of severe privations incident to the allied blockade, showed the results of malnutrition. While these varied in kind and degree, a strikingly large majority developed tubercular infections of different types and severity.

The marked or rapidly progressive tubercular cases were evident to both patient and medical attendant. However, many were in what they regarded as "good general condition." But these, from time to time would develop a peculiar reddening of one or both eyes for which they were moved to seek relief. Such attacks fitted the description of "periodic transient episcleritis" by Fuchs, or the "red eye" of Hutchinson, and always coincided with evidences of lowered general resistance.

Upon examination there is seen an acute injection of a segment of palpebral conjunctiva, usually less than a quadrant, but with no secretion, no pain, no photophobia and no interference with vision. Often if the patient did not actually see the area, he would not know the injection was present. The transitional fold of conjunctiva is not involved.

In the center of the reddened area, there is found a small, usually lens shaped thickening, which is evidently subconjunctival. It is slightly moveable on the scleral surface, but not painful on palpation. The involved area is edematous, even to the stage of thin gelatinous transparency. It never results in softening nor ulceration, but gradually grows smaller, and disappears in two or three weeks with no demonstrable after effects. It is thus seen how markedly this condition differs from acutal scleritis.

Upon physical examination little gross evidence of tubercular activity may be found In fact, I have had examiners, and especially patients grow quite vexed when I insisted that evidences of tuberculosis would be uncovered if searched for with sufficient diligence. In this, the x-ray is our most valuable diagnostic aid. We find a notable enlargement of the glandular structures in the mediastinum, with marked increase in their calcification. At times strands of peribronchial thickening extend in a fan shaped area thence to the periphery.

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*Read before the Section on Eye, Ear, Nose and Throat at the Sixty-Ninth Annual Session of the Mississippi State Medical Association, Greenville, May 6, 1936.

Scattered throughout the lung substance there may be an unusual number of calcified glands. At times, however, the examiner will be astonished at the extent of the lung involvement, when externally the patient seems in good general condition.

It is usually evident that the resistance of these individuals is below par, as shown by slight anaemia, loss of weight, or history of recent illness. Other foci of infection may be discovered co-incidently, i.e. periapical abscesses, infection of the tonsils or sinuses, or chronic inflammatory conditions of the prostate or cervix. Naturally it is difficult clinically to evaluate the relative distant effects of the tubercular and pyogenic foci, or to state which was primary.

When informed as to probable significance of this "spot in the eye," some patients tend to regard the examiner as an unjustified alarmist. Naturally the desire to disbelieve, is the source of the conviction that no serious abnormality could be present. It is amazing the number of patients who refuse detailed examination, for fear something serious will be discovered. By refusing to learn its presence, they lull themselves into the delusion that such a condition could not possibly exist. I know of no more false adage than, "What we don't know, can't hurt us." The fact, is the things we don't know eventually prove our destruction.

In all cases of episcleritis, inquiry will detect some cause of recent lowered resistance, i.e., long periods of fatiguing work, defective nutrition, recent child-birth or acute infections. The tubercular element usually latent in its calcium capsule, is enabled by the lowered resistance to leak out. Whether the area of episcleritis results from an invasion of the blood stream by actual bacteria or their toxins, or is merely a manifestation of local allergy, I leave for others to determine.

In the forty-eight cases presented, the preponderance of females is notable, there being 34 to only 14 males. While the ages varied from 6 to 68, the grouping of the younger adult life, 21-30, showed the highest incidence, there being 15. The next higher, 31-40 was 14. After that it falls off rapidly, and the condition is practically never seen at the extremes of life.

For its differentiation, the phlyctenule is most likely to cause confusion. The phlyctenule, however, involves either the cornea or its limbus. Furthermore, it causes marked photophobia with local tenderness and later vascularization of the cornea. Eventually the phlyctenular nodule breaks down and forms its typical ulceration.

Local treatment is indicated for the phlyctenule, while for the episcleritis it is of little consequence. Fortunately the general treatment of both conditions is practically identical, being the usual antitubercular regimen that heightens resistence to all types of infection, i.e., rest, fresh air, sunshine, nutritious food in sufficient quantity, and its vitamin content augmented by the addition of cod liver oil or simular products.

As far as I have been able to learn, this nodular episcleritis is the earliest external sign of severe focal infection, and which is generally tubercular in origin. It should be regarded not as an eye disease, but as symptomatic, i.e., a warning of impending danger. When recognized early and thus interpreted it is a measure of great economic value to the individual, or even a life saving clue.

SEX INCIDENCE OF PATIENTS SHOWING

NODULAR EPISCLERITIS

Males	14
Females	34

AGE INCIDENCE OF 48 PATIENTS SHOWING NODULAR EPISCLERITIS

Under ten years	4
11-20 years	10
21-30 years	15
31-40 years	14
41-50 years	2
51-60 years	2
61-70 years	1

DISCUSSION

DR. GEORGE E. ADKINS (Jackson): It has been my pleasure for the last few years to be associated with Dr. Wilde in a number of these cases, some of them referred from my department to Dr. Wilde and quite a few referred by Dr. Wilde to the x-ray department, and I am speaking only from the radiographic findings as long as I do not qualify as an oculist.

When Dr. Wilde asked me to discuss the paper I went back through a number of x-ray reports that I had written for him. The usual case reads, "The bony cage is well formed, the pleurae are smooth and regular, costo-diaphragmatic sulci well formed, (the heart usually is moderately small for size), they all show a hilum thickening with hilum and bronchial glandular calcifications usually nested densely around the hilum and shading out toward the periphery." This type of findings indicated to me, as a rule, the bovine type of infection. Dr. Boswell is to follow in this discussion and he probably is going to tell me that I have no right to say what type of infection is present from an x-ray examination, this probably being true.

Just now I am reminded of the old classification of Dunham's fans (the term has probably been dropped from general use) and at one time it was said that one Dunham fan could be disregarded, two were suspicious and three considered diagnostic of tuberculosis. Whilst this is not wholly true we do know that there are some good indications from the old so-called Dunham's fans and I notice in Dr. Wilde's cases that most of these pictures show the two Dunham's fans. I should like to sound a word of warning to those who expect to depend to some extent on the x-ray diagnosis of these cases and to say that the dilatation that we see so commonly about the basal bronchi should not be taken for tuberculosis and probably does not enter in to consideration as being productive of a episcleritis.

DR. HENRY BOSWELL (Sanatorium): I feel a great deal of timidity in coming before a bunch of men who deal with organs of the body of which I know nothing, to discuss a paper. I am not going to take any part of it except the clinical significance. It has been my pleasure for a number of years to see this particular inflammatory process of the eye, and I might say to the oculists here this morning, that I saw them for many years referred to me by the oculists. Dr. Wilde happened to be the first oculist in Mississippi who ever referred a case to our clinic to find out why he had an inflammatory process which was unexplainable. Our records extending back over 18 years show that we have seen many cases, most of them come again for examination, a few occurring during the time of their treatment, and as Dr. Wilde has well said it occurred at a time when that patient instead of progressing was losing ground. It seems to be present only in those cases that are below par, and as soon as their up-grade is established it disappears.

In our own examinations of the cases referred to us, they are almost always found to be tubercular; some of them of the mediastinal glands. I remember one case we had that we felt sure there was tubercular area somewhere. We could not demonstrate it by x-ray or physical examination, and I drew on my imagination that it was a change in these glands that could not be seen because of the starnum. I had this patient injected with 1/100 of tuberculin. We did not have to inquire if it was tuberculosis any longer. He had a very marked reaction and the next day the x-ray showed the glands bulging into the chest. We have had one case in the clinic that was negative to tuberculin, and kept searching until finally an abscessed tooth was located. In that particular patient removal of the tooth and drainage of the abscess cleared it up, and there has never been a recurrence and after seven years we are not mistaken in saying he did not have tuberculosis.

And another individual we had in our clinic we searched diligently for ten days; every examination for tuberculosis was made; inoculation later proved negative, all of the tuberculins were negative, and in a short time after this particular patient left I had a report that he blew up with an acute gall bladder, and when they took out his gall bladder they found it had been infected over a long period of time, and his other condition cleared up right away. If a person is thought to be non tubercular this can be proved easily by the same method we use on a rectal fistula case. We shoot them 1/100 tuberculin and the next day he could tell you himself it was tuberculosis by his own pain and reaction. I do not know whether you call this particular condition a disease or not—I rather think not, I thing it is symtomatic, it is harmless, clearing up in a short time without treatment. Unquestionably in our experience, extending back over 25 years, we think it is always as a result of focal infection somewhere, and is in most cases that of tubercular disease, whether it be bovine or the other kind.

When we find tuberculosis of the glands or bones or joints we expect to find a large percentage of them bovine. Tuberculosis of the lungs in every country of the world has been believed to be due in about 98 per cent to the human type. I am thoroughly convinced that when a patient comes in to you gentlemen with that kind of inflammatory process in his eye, it isn't a difficult thing for the man who is as dumb as I am, to look at one's eyes and tell it is not a serious disease of the eye, but an indication that we had better stop and look for what is causing it somewhere back down the line.

Laboratory Aids in the Diagnosis of Communicable Diseases*

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INTRODUCTION

Diagnosis of communicable disease prior to the work of Pasteur and Koch was from clinical symptoms only. Modern bacteriology began with the discoveries of these two scientists and since their discoveries bacteriology and immunology have developed rapidly. Developments in these two phases of medicine have, among other things, contributed much toward the accurate diagnosis of communicable diseases so that at present those health officers and physicians relying wholly upon clinical manifestations for diagnostic criteria are only those who are not giving their patients full advantage of available information.

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*Read before the Section on Hygiene and Public Health at the Sixty-Ninth Annual Session of the Mississippi State Medical Association, Greenville, May 5, 1936.

It is apparent that inaccurate diagnosis leads to inaccurate treatment and erroneously applied preventive measures. Diphtheria, Vincent's infection, streptococcic sore throat, and even syphilis and tuberculosis of the throat often resemble each other so closely that differentiation cannot be made without laboratory aid. Yet, treatment of these diseases is so radically different that it behooves those in charge to clear up the diagnosis before proceeding too far with treatment. The same facts apply equally as well to diseases in the continued fever group including enteric fevers, malaria, undulant fever, tularemia, endemic typhus fever, tuberculosis, and syphilis. Even in the face of these undeniable facts many health officers and physicians still rely entirely upon clinical manifestations as diagnostic criteria for communicable diseases.

The fact that a given disease in different individuals presents a multitude of variations from the text book picture makes it imperative that the laboratory be used in diagnosing these diseases and according to the extent to which these laboratory methods are used will those concerned reap full benefit of our present knowledge of diagnosis and treatment.

CONTINUED FEVERS

The fact that typhoid fever, paratyphoid fevers, and dysenteries often simulate each other as well as other diseases demonstrates the need for laboratory diagnostic aids in this group of diseases. Malaria, endemic typhus fever, tularemia, undulant fever, and sometimes syphilis and tuberculosis are often confused with typhoid fever. It is well known that for each of these diseases there is one or more reliable laboratory diagnostic aids which should be used when a case of continued fever of undetermined or obscure origin is presented to the physician.

Physicians, whether in private practice or public health work, must keep these facts in mind in order to render the best of service to those whom they are serving. Malaria is always prevalent in Mississippi and frequently the more chronic or mild form of this disease resembles typhoid so closely that without the use of laboratory diagnostic aids the two are confused. Typhus fever has been found to be prevalent in Alabama and Texas and recently several cases have been diagnosed in Mississippi. Tularemia and undulant fever are being found frequently enough in Mississippi to necessitate keeping them in mind in dealing with continued fevers.

Foremost among laboratory methods which have been used in diagnosing typhoid fever in Mississippi has been the Widal agglutination test and in a majority of instances this has been used to the exclusion of other laboratory methods. Unfortunately, the Widal test is of relatively little value in diagnosing typhoid fever in Mississippi. In the first place, the method which has been most commonly used in collecting blood for this test has been to collect a drop of blood on a glass slide and send to the laboratory as a dried specimen. Such a method is unreliable in detecting agglutinins in the blood because drying seems to alter the agglutinating ability of the serum under question. Only when the test is made with undried serum is the result obtained reliable. Even when the latter method is used, in areas where typhoid fever is endemic and a large amount of typhoid vaccine has been administered, little dependence can be placed on results obtained. It is well known that the Widal does not become positive in the average case of typhoid fever until the eighth to tenth day of illness. Following typhoid immunization the Widal becomes positive and remains so for at least a year and in about 25 per cent of instances for as long as five years.[1] Hence, a single Widal from such individuals is of no value if the patient has had typhoid vaccine within the previous five year period.[2]

Havens found in Alabama that a large percentage of the normal population had typhoid bacillus agglutinins in the blood. Of 1,136 normal individuals surveyed, 23 per cent showed the presence of typhoid agglutinins and of those having agglutinins only one fifth (20 per cent) gave a history of having had typhoid fever or having received typhoid vaccine, leaving 80 per cent of the positive Widals unaccounted for insofar as vaccine and having had the disease is concerned.[3] From the work of Havens of Alabama it is quite apparent that little significance can be attached to a positive Widal even though immunization and a prior attack of the disease are excluded. A test which is positive in more than 20 per cent of apparently normal persons is difficult to interpret in the case of any particular individual. Therefore, the Widal, even when properly done, is of extremely doubtful value as a diagnostic measure.

The most reliable laboratory diagnostic methods for aiding in diagnosing typhoid fever are blood, feces, and urine cultures. It is true that none of these methods alone will reveal the organisms in 100 per cent of cases but when all three methods are used, more than 80 per cent of typhoid patients will show organisms in one or more of these specimens during the first four weeks of illness. After the first week of illness a decreasing percentage of typhoid fever patients show the organisms in the blood while an increasing percentage show organisms in the stool through the fourth week of illness. The comparative values of blood, stool, and urine cultures at various stages of the disease as diagnostic measures have been shown by Dr. Havens. In the table below are given the percentages of blood, stool, and urine specimens found positive at various stages of the disease, by Havens, based on collection and examination of a single specimen for each examination regardless of the stage of the disease. Additional specimens would, undoubtedly, have increased the positive results.[4] When specimens of blood, stool, and urine are collected routinely from all suspected typhoid patients, a very large percentage of those actually having the disease will show typhoid bacilli in one or more of the above types of specimens. Such procedure will lead to much more accurate and earlier diagnoses of typhoid fever and other enteric infections, and when these methods are supported by specific laboratory diagnostic procedures for other continued fevers many more cases of typhus fever, undulant fever, malaria and tularemia will be accurately diagnosed.

Week of Illness	Blood	Stool	Urine
First	72	66	60
Second	44	77	32
Third	22	79	9
Fourth	40	100	28
Total	49	80	33

When typhus fever is suspected, and it should be kept in mind in dealing with undiagnosed fevers, a Keidel tube of blood should be collected and a Weil-Felix agglutination test done with this serum. You no doubt recall that this test is made by the use of Bacillus proteus X19 which is agglutinated by serum from typhus fever patients and is a relatively accurate method of diagnosis, the reaction becoming positive after the first four or five days of illness.

For aiding in diagnosis of malaria there is the well known microscopic examination of strained blood smear which can be carried out by the physician or the laboratory. A more frequent use of this method in continuous fevers and malaria suspects will place malaria treatment upon a much more accurate basis and will lead to earlier diagnosis of other types of continued fevers. A common practice has been to treat continued fevers as malaria and consider other types of continued fevers only when the antimalarial treatment failed to clear up the fever. This practice has led to many cases of typhoid fever being diagnosed only after two or three weeks of illness and frequently after secondary cases had occurred.

Undulant fever and tularemia occur frequently enough in Mississippi that they must be considered in making differential diagnosis of continued fevers. For each of these there is a relatively accurate agglutination test which can be made. In the State Hygienic Laboratory when Keidel tubes of blood are received for culture it is the usual practice to do agglutination tests for undulant fever and tularemia.

RESPIRATORY INFECTIONS

Diphtheria, streptococcic sore throat, Vincent's angina, and even secondary syphilis and tuberculosis of the mucous membranes frequently cause difficulty in diagnosis. It is true that these diseases usually present clinical differences but so frequently mistaken diagnoses are made that it behooves those concerned to use all practical methods at hand for diagnosis. Of course when one is suspicious of diphtheria in a given case, treatment should be given for diphtheria even before the diagnosis is confirmed but laboratory diagnostic procedures should be carried out.

The most accurate method for diagnosing diphtheria is by culture from nose and throat. Such culture should be made by collecting a swab from the nose and throat of the suspect, placing this swab in a sterile cotton-plugged tube and sending to the laboratory for culture. This is much more accurate than staining and examining microscopically a direct smear from the nose and throat. The same procedure is carried out in diagnosing streptococcic sore throat except a different culture media is used in the laboratory. Vincent's infection is usually easily determined by microscopic examination of direct stained smear from the lesion. When a case presents itself having a lesion which might be one of these diseases, a direct stained smear should be examined which will often show the cause in the form of diphtheria bacilli, streptococci, or Vincent's organisms. This method often fails to reveal the causative organism and in such cases the culture method should be used. Secondary syphilitic lesions often resemble the more acute infectious diseases of the nose and throat but are more persistent. When lesions of this type persist for more than 10 days syphilis should be suspected and a blood Wassermann should be done.

SUMMARY AND CONCLUSIONS

1. From the standpoint of the physician in the field, laboratory aids in the diagnosis of some of the communicable diseases have been discussed in this paper.

2. Although reliable laboratory tests for certain diseases, especially the continued fever group, are available to us, we are not using them as extensively as we should. Too much reliance is placed upon clinical manifestations as diagnostic criteria, resulting in inaccurate

diagnoses, mistreatments, and difficult and inefficient control of communicable diseases.

3. The Widal test is of relatively little value in the diagnosis of typhoid fever in Mississippi and certainly it is not a pathognomonic test in any sense of the word. Blood, fever, and urine cultures should be used instead of the Widal.

4. Through the use of these laboratory aids earlier and more accurate diagnoses of some of the communicable diseases can be made, resulting in more effective treatment, more effective control, and better service to the people being served.

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DISCUSSION

A MEMBER (Jackson): The paper which you have just heard is a most timely one because of the likelihood of error in the diagnosis of these diseases when diagnosis is by clinical symptoms only. Symptoms of a given disease in a group of individuals are determined by a number of variable factors such as dosage and virulence of the infecting organism and specific and general resistance of the host. These variable factors so frequently play a part in determining the clinical picture of a given disease in a given individual that in many instances it is impossible to make an accurate diagnosis without the aid of laboratory methods.

One should keep in mind the relative significance of negative and positive laboratory findings. In general, negative laboratory results mean much less than do positive results for when the latter are obtained the problem of diagnosis is usually solved while negative findings do not necessarily mean that the disease for which the test was made is not present. For instance, a negative blood culture for typhoid bacilli in the third or fourth week of illness by no means shows that the patient does not have typhoid fever because the bacteremia of typhoid fever subsides in more than half the patients by the end of the third week of illness. Similarly negative results upon microscopical examination of a direct smear for diphtheria bacilli does not mean that the lesion from which the smear was taken was not diphtheritic. On the other hand one is much more likely to find diphtheria bacilli by culture and microscopical examination than by the direct method.

Diagnosis of communicable diseases is becoming increasingly difficult because of the increasing incidence of other continued fevers in Mississippi such as typhus fever, tularemia, and undulant fever, but the problem of differential diagnosis becomes much less difficult by a more frequent use of the laboratory since for all of these diseases there are practical laboratory diagnostic aids. However, as was emphasized by Dr. Knight, the Widal is of little value as a diagnostic procedure in Mississippi unless the test is done from specimens collected on successive days.

Proper treatment, which in some instances is of a specific nature, community protection insofar as prevention of spread is concerned, and difficulties frequently encountered in accurate diagnosis of communicable diseases demand of those with whom the responsibility of diagnosis rests that all available practical laboratory diagnostic aids be used routinely.

I am sure all practicing physicians and health officers would do well to follow the suggestions given in the paper by Dr. Knight.

DR. H. C. RICKS (Jackson): I am glad Dr. Knight brought this paper because it emphasizes the attitude of the State Board of Health and laboratory workers throughout the state toward the laboratory as an adjunct in the diagnosis of diseases. I am grateful to the medical profession for the advances that have been made along these lines in recent years.

During the last years, we have had a dropping off in the number of requests for agglutination tests in typhoid and an increase in the number of specimens sent in for culture. I am sorry that Dr. T. W. Kemmerer, director of the State Hygienic Laboratory, is not here to tell you of the improvements that have been made along this line.

Dr. Leon S. Lippincott, the outstanding laboratory man and pathologist of the state, is here and I would like to hear him discuss this paper.

DR. LEON S. LIPPINCOTT (Vicksburg): I am a sort of part time public health laboratory man. I make laboratory examinations for the Warren County Health Department a part of each year. I have enjoyed this paper very much. I think it is worth while to bring these facts before the physicians of the state.

Proving diphtheria is not always easy. I do not believe that direct smears give much information. Cultures are better but even then mistakes are easily made. In the interest of the patient, if cultures show organisms that look like diphtheria bacilli, they should be considered diphtheria bacilli until proven otherwise. Treatment should not be delayed for actual identification which may take several days.

Several years ago we had a part time health officer in Warren County who was having trouble with his nose and we made cultures. We found organisms that looked like diphtheria bacilli. We thought it would be rather a joke to prove a health officer a carrier and to insist on quarantine. Further tests proved the organisms isolated to be non-virulent and of the diphtheroid group. Our joke was off. Many organisms may be mistaken for diphtheria bacilli.

A few years ago we became interested in the streptococcus which is found in scarlet fever. Rabbits were inoculated with hemolytic streptococci isolated from typical scarlet fever patients and an immune serum of high titre produced. Since then we have been conducting agglutination tests on all hemolytic streptococci found in throat cultures whether scarlet fever is suspected or not. We have found throat streptococci to agglutinate with the scarlet fever streptococcus serum when the patients had no typical scarlet fever rash. In working with Dr. F. M. Smith, the director of our county health department, we have found that there are sporadic cases of scarlet fever and we believe that there is such a thing as scarlet fever without a rash. We believe also that such patients with sore throats showing agglutinable streptococci without a rash, or carriers of such streptococci, may communicate typical scarlet fever to others.

There is one problem which has arisen which does not belong in this discussion but it is along public health laboratory lines. The American College of Surgeons has been doing a great work in an effort to standardize hospitals. One of the requirements is that a hospital shall have a laboratory. More recently the Mississippi State Hospital Association has established what we call minimum standards for member hospitals, which, we hope, will raise the standards of the hospitals of the state. One requirement is a hospital clinical laboratory. Most Mississippi hospitals have laboratories, but sometimes there is a county public health laboratory in the town in which a hospital is located and the laboratory work of that hospital is done there. The people are unwilling to pay the hospital for laboratory work because they can get it done in the county laboratory for nothing. Of course, every hospital should have a laboratory and the public health laboratory technician should not have to be called out of bed at night to make a laboratory diagnosis. The delay when the hospital and county laboratory are located on opposite sides of a town and the technician resides in still another place may be extremely dangerous in some acute cases where the question of immediate surgical operation is involved. I hope you will give this matter some thought. It means much to the welfare of patients and to the standardization of hospitals.

DR. FELIX J. UNDERWOOD (Jackson): In several counties of the state, the full-time county health department pays a definite amount monthly toward a good local laboratory or laboratories, approved by the Director of the State Board of Health Laboratory, for the performance of public health laboratory functions of the health department. This has worked out in a highly satisfactory manner to the health departments and is less expensive to the county department budget than the conduct of a laboratory of its own would be.

In organizing full-time health departments in the future this plan will be followed in counties where there is a local laboratory with approved standards of practice.

In at least three counties appropriations for equipment and maintenance of a laboratory in the health department were secured by the physicians of the counties. In thinking of discontinuing these particular laboratories and transferring the work to an approved local hospital laboratory, it would be necessary for the interested hospital to secure the approval of the physicians of the county served by the laboratory, also the approval of the county board of supervisors for the reason that these laboratories were established by the board of supervisors at the urgent request and by considerable pressure from the local medical profession.

While the State Board of Health would approve such a transfer in order that the hospital may meet certain requirements, it would not be disposed to force the issue against the will of the medical group and the boards of supervisors of counties where such an arrangement already exists. While the State Hospital Association has its requirements, the State Board of Health would also have to be entirely satisfied with the equipment in the laboratory and the qualifications and ability of the technician or technicians making the examinations.

DR. F. MICHAEL SMITH (Vicksburg): Permit me to depart from an ethical discussion of this paper to briefly discuss a discussion made by Dr. Lippincott, who modestly states that he is part-time laboratory man by virtue of work he does for the department we are directing. I think it not amiss to state that if it were not for the five or six technicans the doctor has he might think he was a full-time laboratory man.

In our routine work, whether submitted to his laboratory or the other laboratory of our city that assists us, or to the State Hygienic Laboratory, we find oftentimes causative agents, or reaction to communicable disease tests that we least suspected. This, we have found to be especially true in blood examinations of dairy helpers, food handlers, expectant mothers, etc., when submitted for Wassermann. We have oftentimes been surprised to have a report sent in of two to four plus agglutination for undulent fever.

Practically everyone knows the inestimable value of the laboratory assisting in the diagnosis of tuberculosis, diphtheria, typhoid fever, syphilis, gonorrhea, malaria, etc., and inasmuch as we are perhaps just entering the field of greater opportunities we desire to register our strongest approval for more funds for laboratory work, and more specimens for laboratory study in our efforts in control and prevention of communicable disease.

I can conceive of no greater service a health department can give to people it serves than in a careful search for existing preventable maladies, an effectual effort in their control, whether those efforts be immunization, environmental sanitation, food sanitation, or whatnot. And in giving this service we find an efficient laboratory service an inestimable aid.

DR. A. L. GRAY (Jackson): I have enjoyed Dr. Knight's paper very much. As time goes on we are placing more and more dependence in laboratory tests in the diagnosis of these diseases. For instance, a few days ago a case of diphtheria was reported in a small child, and in the course of investigation it developed that three or four weeks prior to the onset of this illness another family had been living in the house with these people and that one of the children of that family had been under the care of a physician for treatment of a nasal condition and that the physician had diagnosed the condition nasal diphtheria. Direct smear examination showed no diphtheria bacilli. No diagnosis of diphtheria was made. The child was sent back home and a few days later blew what looked like a piece of gristle out of his nose. Upon further investigation and examination diphtheria bacilli were found in the nose and throat of this first child as well as several other members of the family, which demonstrates how very easy it is to make a mistaken diagnosis based upon direct smear alone.

DR. KNIGHT (closing): I wish to thank all of you very much for staying and for the discussion you have given this paper.

I want to mention one point related to tuberculosis and that is—it is quite common for the laboratory to find tuberculosis before there are any signs or evidences present physically to aid us in making a diagnosis.

Mississippi State Medical Association

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EDITORIALS

A VERY MERRY CHRISTMAS AND A HAPPY NEW YEAR

MAY THEY BRING TO YOU EVERYTHING GOOD

FROM OUR PRESIDENT

To the officers of the medical societies and the medical profession of Mississippi:

My dear Doctors:

December is the best month to pay dues for 1937 to the local and state medical associations. I hope that each member of the Medical Association of Mississippi will make himself a committee of one to not only pay his own dues but urge the other doctor to pay his as well. A few doctors in each medical society will invariably procrastinate in paying their dues, but if some other doctor not necessarily the secretary, will take it upon himself to speak to him and urge him to pay his dues, and even if necessary, take the money to the secretary for the doctor, it will be one of the best means in the world to build a large medical society. Every member should go out after the doctor who is not a member and, like in the protracted meetings of old, do "personal work."

This is the type of membership drive that will accomplish the most good, and there is no time like NOW to do the work. The best investment that any doctor can make is to see to it that his dues for membership are always paid in his medical society. There is no investment in the world that will yield greater dividends than this. Let's make the month of December a real campaign month. Let every member of his society go out after the doctor who is not a member and get him in!

We have a great percentage of members in the Mississippi State Medical Association today than ever before in its entire history, but we can still do better than we have done if we will put our shoulders to the wheel and make this membership drive go over in the month of December.

To those of you whom I will not have an opportunity to see before the holidays, permit me to extend to you my heart full of love for your loyalty to me, and also the Season's Greetings! I am,

Sincerely yours,
HARVEY F. GARRISON

Jackson,
Nov. 4, 1936.

REMEMBER

Medical Defense Protection lapses with the calendar year. This means that if your dues for 1937 are not paid by January 1, the Council can provide no defense until dues are paid. The Council can undertake the defense of no suit brought for acts committed before dues are paid.

Also, the secretary of each component society must furnish to the secretary of the Mississippi State Medical Association a report of all paid-up members on or before February 1.

WHY PUT IT OFF?

DOES THIRTY-FIVE YEARS MAKE A DIFFERENCE?

"SHOT GUN" MEDICATION

Much has been said of late regarding the curse of modern therapeutics—poly-pharmacy. Reading Dr. Pyle's recent article in "American Medicine" (June 1st, 1901), one almost inclines to the hope, if not the belief, that the millenium is about to come and that we will soon have a purely scientific method of medication.

But though this is a condition of affairs for which we devoutly hope, we fear that a great deal more dust will be raised before the chaff be entirely removed from the wheat. "It is time," says Dr. Penn, in the Memphis Medical Monthly, "we acknowledged that the ris medicatrix has not kept pace with the rest of the medical science. Works on therapeutics and materia medica still evidence our weakness here by continuing to suggest large numbers of drugs, many of which are inert, for every malady." One has but to glance casually about any retail drug store to appreciate the truth of this statement. The mass of proprietary preparations attests it; the increasing size of the pharmacopeia attests it; and we fear that if the prescription file were examined much would be found there to attest it.

We do not forget that there are many remedies whose virtue is beyond reproach. The so-called specifics: quinine in malaria, mercury and iodide in syphilis, and a very few others. We do not pretend to ignore the great advances made in late years, nor to depreciate the value of such blessings as thyroid extract or diphtheria antitoxine. We would simply suggest that there are many conditions for which we have no specifics and in which polypharmacy is apt to have its fling.

The reason for this, we believe is not that doctors as a rule are ignorant, so much as that they grow careless.

An agent of some manufacturer comes in with his arguments and samples. He probably does not impress the doctor with his arguments; but he leaves his samples on the desk, and some day a neat catchy label impresses the doctor. Next day he prescribes the mixture. A week later he has forgotten all about it. Now if that doctor, after careful consideration, had decided that in certain conditions this medicine ought to be satisfactory, if he had used it on not one case but a series of cases, keeping careful notes of his observations, we would not have one word to say—but how many doctors do this? We believe that the "fads in medicine" grow out of the doctor's carelessness, and many of us have not sense enough to realize that very expression—"fads in medicine"—is one of the greatest reproaches that can be applied to us.

City physicians are apt to look with somewhat of a Pharasaical air upon the country practitioner who, sunburned and unshaven, jogs along the dusty road behind the old flea-bitten bay, not knowing that the hard-worked old fellow has many rewards to which he himself is a stranger. Leaving out the affection and respect and confidence of his patients, which are more marked in rural than in urban practice, the country doctor can probably show you as long a list of recoveries and as small a death rate, proportionately, as the best of his city brethren, despite the fact that he is rarely consulted for trivial ailments. We are accustomed to attribute this to the open air life and simple living of country people. The most celebrated of country practitioners gave as his reason for disagreeing with the prognosis of a "grand ceety physeecian," who had predicted speedy dissolution for a patient, that "Saunders has been fillin' his lungs for five and thirty years wi' strong air, an' eatin' naethin' but virny oat meal, an' drinkin' naethin' but fresh milk fra the coo, and followin' the ploo' through the new turned sweet smellin' earth, an' swingin' the scythe in haytime and harvest, till the legs and airms o' him were iron an' his chest was like the cuttin' o' an oak tree." But there is yet another reason. The country doctor is a dispenser of medicine, a travelling apothecary shop. Being forced to carry a small quantity of drugs he speedily eliminates those that his experience teaches him are useless. He can not carry any of the new tasteless, and generally useless, quinine elixirs, but stirs up the plain sulphate in a tumblerful of water or a cup of coffee. If a purgative is needed the patient does not get some elegant pharmaceutical preparation containing a dozen ingredients, but takes his calomel or epsom salts with satisfactory results.

A young doctor just established in a country neighborhood not long ago showed, with much pride, his stock of medicines to the old man who had ministered to the ailments of half the country for forty years. The old fellow scratched his head and gave his verdict; "They're mighty nice, and I have no doubt are good in their way, but by the end of a year you won't carry half as many, and by the time you have been here five years you'll find that you can limit yourself to thirty or forty bottles and then find that the stuff in half of them will get stale." This may be swinging the pendulum to an extreme, but to an extreme certainly less dangerous than the other. The profession has lived through one era of drugging, and the era of "expectant treatment" that followed. Now we are certainly back again to the excessive medication of our forefathers and the patients of our successors will probably rejoice in that the expectant treatment will be reached again. "Medical opinions travel in cycles"—true, perhaps, but a great reproach to the profession. We should learn to move forward, each generation beginning where the former left off, each trying to do its part, however small, to advance the true scientific knowledge of the profession. To do this we must lead the druggists and not be led by them, must practice rational medication and not poly-pharmacy, must treat our patients as human beings and not as omnivora.—Editorial in the Mississippi Medical Record, August, 1901.

MISSISSIPPI STATE BOARD OF HEALTH

Dr. Martha Eliott, Assistant Chief of the Children's Bureau, Washington D. C., spent several days in Mississippi the latter part of October. During the visit, Dr. Eliot attended a county midwife meeting and observed other phases of the public health program in Adams County, went to Yazoo, Sunflower, Washington and Lauderdale Counties to see various maternal and child health activities in which she was especially interested, and on Thursday evening, October 29, addressed the State Conference of Social Workers on the subject of "Progress in the Services for Children Under the Social Security Act."

At the meeting of the American Association of School Physicians which met at the same time the American Public Health Association did in New Orleans, Dr. Underwood delivered a paper on the subject of "Health Service in Schools."

VISITORS

J. J. Bloomfield, United States Public Health Service, Washington, D. C.

Martha M. Eliot, M.D., United States Children's Bureau, Washington, D. C.

Chas. Armstrong, M.D., Surgeon, United States Public Health, Washington, D. C.

Roscoe L. Mitchell, M.D., Assistant Director, Bureau of Health, Augusta, Maine.

Evelyn Davis, National Organization for Public Health Nursing, New York, New York.

Dr. D. L. Anderson is now associated with the Mississippi State Board of Health as Clinician with the Field Tuberculosis Diagnostic Unit.

H. A. Kroeze, Director of the Division of Sanitary Engineering of the Mississippi State Board of Health, has been requested to serve on the staff of lecturers in the Course for Sanitation Officers at the School of Engineering, Vanderbilt University. Mr. Kroeze will deliver four lectures on food sanitation and two lectures on industrial hygiene, November 12, 13 and 14.

This course is designed, in so far as possible, to give a fundamental knowledge of the subjects underlying the work of the sanitation officer. At the same time it is hoped that the instruction offered will serve both to increase the fund of practical knowledge and to provide a foundation for further study. The aim is to make the sanitation officer more effective in his part of the public health program.

Students from nine southern states are taking this course at the present time. Mississippi has three members of county health department staffs in attendance. The course is of three months' duration. A second course will be offered at Vanderbilt beginning January 4, 1937.

From October 19 through 22, Dr. Underwood and several staff members attended the meeting of the American Health Association in New Orleans. Dr. Underwood spoke before the health officers' section of the Association on the subject of "The Need for and Value of an Intensive Program of Health Education in State Health Departments." He also made a radio talk on the subject of "Health Conservation in Schools."

On October 29, 30 and 31 the State Social Workers Conference held its annual meeting in Jackson. Dr. Felix J. Underwood was President this year and spoke on the subject of A New Era for Social Work. Prominent speakers on the program were:

Dr. Felix J. Underwood, Executive Officer State Board of Health, Jackson.

Dr. Martha Eliot, Assistant Chief, Children's Bureau, Washington, D. C.

Dr. D. V. Galloway, Director of Lauderdale County Health Department, Meridian.

Carmelite Janvier, Visiting Teacher, Orleans Parish School Board, New Orleans, Louisiana.

Dr. H. C. Ricks, Director County Health Work and Epidemiology, State Board of Health Jackson.

Mrs. Eva Moore Adams, Supervisor Health Education, State Board of Health, Jackson.

W. F. Bond, Commissioner, Department of Public Welfare, Jackson.

Dr. W. A. Evans, Aberdeen.

Dr. Mabel Williams Kemmerer, Jackson.

Honorable V. A. Griffith, Judge Supreme Court, Jackson.

Dr. Wm. DeKleine, Medical Director American Red Cross, Washington, D. C.

Dr. John L. Sutton was elected President for the coming year.

FELIX J. UNDERWOOD,
Executive Officer

Jackson,
Nov. 10, 1936

MISSISSIPPI STATE HOSPITAL ASSOCIATION

At a called meeting of the Mississippi State Hospital Association at Vickksburg, Nov. 6, the work of the association and of the various committees was discussed and plans made for the remainder of the year.

The matter of hospitalization insurance received particular attention and the committee on Fixed Periodical Payments for Hospital Services, working with Dr. H. A. Gamble, a member of the Board of Directors, was asked to present a workable plan for this state at the earliest possible date. The committee consists of Dr. H. Lowry Rush, chairman, Meridian; Dr. George E. Adkins, Jackson; Dr. T. E. Ross, Hattiesburg; Dr. L. B. Morris, Macon; and Dr. C. E. Catchings, Whitfield.

The association was assured that investigations are well underway and that a definite plan would be presented in the near future for a state-wide set-up.

The work of the State Hospital Commission and its relation to the hospitals of the state were discussed and a vote of confidence and thanks to the Commission were extended.

Cooperative buying for all hospital supplies and standard hospital records were further considered.

HOSPITALS AND THE SOCIAL SECURITY ACT

"Many requests continue to come to the Chicago office regarding the status of voluntary hospitals under the Social Security Act. As was previously announced, the Social Security Act carried a clause exempting charitable institutions identical with that included in the Federal Income Tax Law and other taxing measures.

"The Bureau of Internal Revenue has ruled that hospitals qualifying under this provision must apply to the Bureau for a specific ruling for the Social Security Act. Full instructions regarding this were carried on page 68 of the October issue of *Hospitals*.

"State Hospital Associations issuing publications or bulletins to their members are requested to call the attention of their members to the necessity for applying for this exemption. They should be advised to follow the instructions published in October *Hospitals*."—Legislative Bulletin No. 55, American Hospital Association, Nov. 17, 1936.

MISSISSIPPIANS AT BALTIMORE

The following were registered at the meeting of the Southern Medical Association at Baltimore: Dr. Frank M. Acree, Greenville; Dr. and Mrs. Frank L. Van Alstine, Jackson; Dr. and Mrs. W. H. Anderson, Booneville; Dr. H. L. Arnold, Meridian; Dr. and Mrs. G. Lamar Arrington, Meridian; Dr. O. N. Arrington, Brookhaven; Dr. Charles LeBaron, Gulfport; Dr. I. W. Barrett, Clarksdale; Dr. and Mrs. J. A. Beals, Greenville; Dr. A. E. Bostick, Iuka; Dr. T. D. Bourdeaux, Meridian; Dr. and Mrs. R. H. Clark, Hattiesburg; Dr. and Mrs. H. L. Cockerham, Gunnison; Dr. J. P. Culpepper, Jr., Hattiesburg; Dr. and Mrs. W. W. Crawford, Hattiesburg; Dr. H. E. Day, Duncan; Dr. G. W. D. Dicks, Natchez; Dr. Oscar G. Eubanks, Crystal Springs; Dr. and Mrs. H. R. Fairfax and daughter, Brookhaven; Dr. H. A. Gamble, Greenville, Dr. and Mrs. Harvey F. Garrison, Jackson; Dr. and Mrs. Frank Hagaman, Jackson; Dr. Leon S. Lippincott, Vicksburg; Dr. and Mrs. J. F. Lucas, Greenville; Dr. H. G. McCormick, Laurel; Dr. John A. Milne, Jackson; Dr. and Mrs. J. H. Newcomb, Richton; Dr. and Mrs. L. L. Polk, Purvis; Dr. W. C. Pool, Cary; Dr. and Mrs. H. C. Ramsey, Laurel; Nelson H. Rector, Jackson; Dr. George E. Riley, Jackson; Dr. Alvan P. Smith, Bay St. Louis; Dr. P. E. Smith, Hattiesburg; Dr. E. B. Stribling, Rolling Fork; Dr. and Mrs. F. J. Underwood, Jackson; Dr. and Mrs. A. G. Wilde, Jackson.

SOUTHERN MEDICAL ASSOCIATION OFFICERS ELECTED

President, Dr. Frank K. Boland, Richmond, Va.

First Vice-President, Dr. Sydney R. Miller, Baltimore, Md.

Second Vice-President, Dr. Lea A. Riley.

Secretary, Treasurer and General Manager, Mr. C. P. Loranz, Birmingham, Ala.

NEXT ANNUAL MEETING—The Association will meet next November-December in New Orleans.

PRESIDENTS' CONFERENCE

An innovation and a feature of the meeting of the Southern Medical Association this year was the get-together dinner meeting of the presidents and presidents-elect of the state medical associations of the South, the states comprising the Southern Medical Association, proposed and planned by Dr. Harvey F. Garrison, Jackson, president of the Mississippi States Medical Association, and a councilor of the Southern Association. Dr. Garrison convened the meeting and was chosen to preside. Dr. Leon S. Lippincott, Vicksburg, served as secretary. There were thirty present. The purpose of the meeting was an exchange of ideas —an informal round-table on matters of mutual interest. A most enjoyable and valuable five-hour session was the result.

The program as arranged by Dr. Garrison was as follows:

1. The Effect of the Social Security Act on the Practice of Medicine in the South.—Dr. C. E. Walker, Assistant Surgeon General, United States Public Health Service, Washington, D. C.
2. The Probable Effect of Hospital Insurance on the Practice of Medicine in the South. —Dr. Seale Harris, Birmingham, Alabama, Past-President of the Southern Medical Association.
3. The Work of the Medical-Dental Service Bureau of Baltimore.—Dr. Walter D. Wise, Baltimore, Secretary of the Medical and Chirurgical Faculty of the State of Maryland, and Roy C. Jones, Baltimore, Maryland, Director of the Bureau.
4. The Best Means of Increasing Membership and Enthusiasm of a State Medical Association.—Dr. E. H. Cary, Dallas, Texas, Past President of the American Medical Association and Past President of the Southern Medical Association.
5. The Value of Medical Organization.—Dr. Felix J. Underwood, Jackson, Mississippi, Past President of the Southern Medical Associaciation, Past President of the Mississippi State Medical Association, and present Executive Officer of the Mississippi State Board of Health.

Each presentation was followed by thoughtful discussion.

Those present voted to hold similar meetings in the future and Dr. Arthur M. Shippley was elected chairman for the 1937 meeting.

The meeting closed with a vote of thanks to Dr. Garrison.

FOLLOW-UP REPLIES

Do you consider yourself cured of the trouble that brought you to the hospital? "No." If not cured, do you consider yourself improved?" "No." Do you suffer from the same symptoms for which you were operated upon? "Yes." Have you gained weight? "No." Lost weight? "7 or 8 lbs." REMARKS: "i have nearly lost my energy as a man dont no what caused it unless it was the shots in the hip. i dont hafter take annything now to move my bowels tha move ever day wit out trouble i can walk a little i am mity weake and am verry short wened but dont want the operation in the side yet yours truly." (Lymphogranuloma inguinale with rectal stricture).

Do you consider yourself cured of the trouble that brought you to the hospital? "No." If not cured, do you consider yourself improved? "Yes." Do you suffer from any of the same symptoms as when here? "Yes." Have you gained weight? "Yes." How much? "haven weighed." Do you suffer from abdominal pain? "Yes." If so, where is pain located? "in the bottom of mystmmach to my back." Other pains? "My right hip." Where located "down mylaig." Do you still menstruate? "No." Is it at regular intervals? "No time." Is there any pain or pulling sensation in region of incision scar? "Yes Near Nable." FURTHER INFORMATION: "My stmmach keep a soreness in the low part thrue to the low part of back."

Do you consider yourself cured of the trouble that brought you to the hospital? "Not sure." If not cured, do you consider yourself improved? "yas sir." Do you suffer from any of the symptoms for which you were operated upon? "have Pain in cut some time." REMARKS: "i riley apreaseated your all orperration i sufered eleven years i hasin ben sick since i left and i riley apreaseate my operation."

DIRECTORY AND CALENDAR OF MEDICAL SOCIETIES

Information is not complete. Secretaries of societies are urged to send in full data so that it may be known when the societies of the state meet; also the names of the officers directing their activities this year should be known.

MISSISSIPPI STATE MEDICAL ASSOCIATION:

Seventieth Annual Session and Thirty-fourth Annual Session of the House of Delegates, Meridian, May 11, 12, and 13, 1937.

Adams County Medical Society: W. K. Stowers, Natchez, president; F. S. Dixon, Natchez, secretary. Meets third Tuesday each month; Natchez, 7:30 p. m.

Amite County Medical Society: D. H. Thornhill, Crosby, secretary.

Central Medical Society: E. L. Walker, Magee, president; L. W. Long, Jackson, secretary. Meets third Tuesday each month, Robert E. Lee Hotel Roof, Jackson, 7:00 p. m., except July and August.

Claiborne County Medical Society: E. P. Jones, Hermanville, president; G. W. Acker, Port Gibson, secretary.

Clarksdale and Six Counties Medical Society: J. E. Powell, Charleston, president; N. C. Knight, Clarksdale, secretary. Meets fourth Wednesday of March and second Wednesday of November, Elks Club, Clarksdale, 2 p. m.

Clark-Wayne Counties Medical Society: W. P. Gray, Waynesboro, president; Albert Hand, Shubuta, secretary.

Coahoma County Medical Society: J. A. Slack, Friars Point, president; N. C. Knight, Clarksdale, secretary. Meets second Wednesday each month, Clarksdale Hospital, Clarksdale 1:30 p. m.

Delta Medical Society: J. W. Lucas, Moorhead, president; F. M. Acree, Greenville, secretary. Meets second Wednesday of April and October. Rotates through five counties, 2 p. m.

Desoto County Medical Society: J. M. Wright, Hernando, president; L. L. Minor, Rt. 4, Memphis, secretary. Meets first Monday of January, April, July, October, Hernando, 10 a. m.

East Mississippi Medical Society: C. H. Gully, DeKalb, president; T. L. Bennett, Meridian, secretary.

Franklin County Medical Society: L. Costley, Meadville, secretary.

Hancock County Medical Society: A. P. Smith, Bay St. Louis, secretary.

Homochitto Valley Medical Society: Lucien S. Gaudet, Natchez, president; W. K. Stowers, Natchez, secretary. Meets January, April, July and October, 2 p. m.

Issaquena-Sharkey-Warren Counties Medical Society: T. P. Sparks, Jr., president; Leon S. Lippincott, Vicksburg, secretary. Meets second Tuesday each month, Mississippi State Charity Hospital, Vicksburg.

Jackson County Medical Society: W. J. Weatherford, Pascagoula, president; R. G. Lander, Pascagoula, secretary. Meets second Thursday of March, June, September and December, Jackson Hospital, Pascagoula, 7 p. m.

Jefferson County Medical Society: W. T. Harper, Fayette, secretary.

Newton County Medical Society: W. T. Pennington, Decatur, president; Dudley Stennis, Newton, secretary.

North Mississippi Medical Society: R. G. Grant, Holly Springs, president; A. H. Little, Oxford, secretary.

Northeast Mississippi Thirteen Counties Medical Society: Z. A. Dorsey, Troy president; A. J. Stacy, Tupelo, secretary. Meets third Tuesday, March, June, September and December.

Pike County Medical Society: J. L. Bauer, McComb, president; Elise Rutledge, McComb, secretary. Meets first Thursday each month, McComb, 6:30 p. m.

Pontotoc County Medical Society: L. O. Carruth, Tupelo, R.F.D., president; O. F. Carr, Pontotoc, secretary. Meets first Tuesday each month, Pontotoc.

South Mississippi Medical Society: J. P. Culpepper, Hattiesburg, president; Carlton Temple, Hattiesburg, secretary.

Stone County Medical Society: Earl W. Green, Wiggins, secretary. Meets with Harrison-Stone-Hancock Counties Medical Society.

Tate County Medical Society: W. D. Smith, Senatobia, president; J. Sidney Eason, Coldwater, secretary. Meets second Wednesday each month, Senatobia.

Tri-County Medical Society: B. L. Crawford, Tylertown, president; R. B. Zeller, Hazlehurst, secretary. Meets second Tuesday of March, Copiah-Lincoln Junior College, Wesson: June, Walthal Hotel, Tylertown; September, Riverside Hotel, Monticello; December, Whitworth College, Brookhaven, 12:30 p. m.

Wilkinson County Medical Society: E. M. Butler, Centreville, secretary.

Winona District Medical Society: P. B. Brumby, Lexington, secretary.

MISSISSIPPI HOSPITALS—CALENDAR OF STAFF MEETINGS

MISISSIPPI STATE HOSPITAL ASSOCIATION:

Eighth Annual Session, Meridian, May 19, 1937.

Anderson Infirmary: Second Friday, each month, 6:00 p. m.

Biloxi Hospital: First Friday, each month, 7:30 p. m.

Clarksdale Hospital: Second Wednesday, each month, 1:30 p. m.

George C. Hixon Memorial Hospital: First Monday, each month.

Gilmore Sanitarium, Amory: Third Thursday, 7:30 p. m.

Greenwood Lcflore Hospital: First Thursday, each month, 7:30 p. m.

Houston Hospital: Last Thursday, each month.

Jackson County Hospital: Second Thursday, each month except July and August, 7 p. m.

Jackson Infirmary: Last Tuesday, each month, 4 p. m.

Meridian Sanitarium: Second Thursday, each month, 6:30 p. m.

---Mississippi Baptist Hospital: Third Tuesday, each month, 6:30 p. m.

Natchez Sanatorium: Second Tuesday, each month, 7:30 p. m.

Northeast Mississippi: First Monday, each month, 7:30 p. m.

Rush's Infirmary: Second Thursday, each month, 7 p. m.

South Mississippi Infirmary: Last Thursday, 5 p. m.

U. S. Veterans' Hospital, Gulfport: Every Monday, Tuesday, Wednesday, and Thursday, 10:45 a. m.

Vicksburg Hospital: Second Thursday, each month, 7 p. m.

Vicksburg Infirmary: First Wednesday, each month, 7 p. m.

Vicksburg Sanitarium: Tenth or week of tenth each month, 6:30 p. m.

Winona Infirmary: First Thursday, each month, 7:30 p. m.

CLARKSDALE AND SIX COUNTIES MEDICAL SOCIETY

The 69th semi-annual session of the Clarksdale and Six Counties Medical Society was called to order in the American Legion Hut, Clarksdale, November 4, at 2:00 p. m., by the President, Dr. D. O. Pierce, with a very poor attendance, probably due to twenty-four hours of continuous rain and cold preceding the meeting time.

The minutes of the previous meeting were read and approved, as was also the annual financial report.

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The Scientific Session:

1. Ruptured Tubal Pregnancies.—Dr. W. W. Hall, Jr., Shelby. Discussed by Drs. W. H. Brandon, J. W. Moody, H. W. Kostmayer, John Darrington. Dr. Hall closed.
2. Coronary Artery Disease.—Dr. W. C. Pool, Cary, visiting essayist from the Issaquena-Sharkey-Warren Counties Medical Society. Discussed by Dr. E. L. Wilkins. Dr Pool closed.
3. Some Observations on Poliomyelitis.—Dr. H. C. Ricks, Jackson. Discussed by Drs. Geo. W. Mast, Lexington; E. LeRoy Wilkins, Clarksdale. Dr. Ricks closed.

Recess.

At 7:00 p. m. the society was reconvened in the banquet hall of the Alcazar Hotel where a banquet was held, and Dr. H. W. Kostmayer, New Orleans, spoke on "Endocrine Therapy in Gynecology."

Dr. John Darrington very ably presided as toastmaster, calling on Drs. Holder, Kostmayer, Wilkins, Hall, Dye, and others for short talks. A subject was assigned to each speaker but none followed the subject.

Dr. W. H. Brandon made a short talk on the importance of every physician being a member of the State Hospital Association and distributed application cards to everyone so that they might apply for membership.

Officers for the year of 1937 were elected as follows:

President, Dr. J. E. Powell, Charleston.

Vice-Presidents: Bolivar County—L. B. Austin, Rosedale; Coahoma County—E. LeRoy Wilkins, Clarksdale; Tippah County—Fred Stone, Sledge; Tallahatchie County—T. F. Clay, Tutwiler; Tunica County—W. H. Williams, Tunica.

Secretary—Dr. N. C. Knight, Clarksdale.

Board of Censors (one member)—Dr. W. H. Brandon, Clarksdale.

Member Medico-Legal Defense Committee—Dr. T. M. Dye, Clarksdale.

NORRIS C. KNIGHT,
Clarksdale, *Secretary*
Nov. 9, 1936.

COAHOMA COUNTY MEDICAL SOCIETY AND CLARKSDALE HOSPITAL STAFF MEETING

The Coahoma County Medical Society and the Clarksdale Hospital Staff were called to order in the dining room of the Alcazar Hotel, at 1 p. m., Wednesday, Nov. 18. The society met at 12 o'clock and the same place for lunch. The president, Dr. J. A. Slack, ordered the minutes read and they were approved.

The scientific program:

Upper Respiratory Infections in Infants and Children.—Dr. William P. Warfield, Clarksdale.

Discussed by Drs. T. G. Hughes, E. LeRoy Wilkins, N. C. Knight, S. D. Robinson, D. C. Pierce, J. L. Levy, W. H. Brandon, and J. A. Slack.

On motion of the secretary, it was voted that at all future meetings the speakers shall bring their papers to the society in a well prepared form, typewritten if possible, and turn the papers in to the secretary at the meeting at which they are presented.

On motion of the secretary, it was voted that all persons discussing papers shall make notes of their discussions and turn them into the secretary at the same meeting.

The president then called for a volunteer speaker for the next meeting and Dr. J. L. Levy held up his hand and said, "I will."

N. C. KNIGHT,
Clarksdale, Secretary
Nov. 23, 1936.

ISSAQUENA-SHARKEY-WARREN COUNTIES MEDICAL SOCIETY

The regular monthly meeting of the Issaquena-Sharkey-Warren Counties Medical Society was held at the Mississippi State Charity Hospital, Vicksburg, Tuesday, November 10, and after a supper served at 7:30 p. m., was called torder by the vice-president, Dr. G. C. Jarrett, with sixteen members and four guests present.

Papers and discussions—Subject—Public Health—Dr. F. M. Smith, Vicksburg, Chairman.

1. Laboratory Aids In the Diagnosis of Communicable Disease.—Dr. N. C. Knight, Clarksdale, exchange essayist from the Clarksdale and Six Counties Medical Society.

Discussed by Drs. L. S. Lippincott and R. A. Street, Jr., Dr. Knight closed.

2. Non-Tuberculous Chest Conditions Simulating Tuberculosis (Roentgen Ray Studies). —Dr. William D. Hickerson, Sanatorium.

Discussed by Drs. W. K. Purks and L. S. Lippincott. Dr. Hickerson closed.

3. The Ethical Relations of the Family Physician and the County Health Officer in the Observance and Enforcement of State and Local Regulations Pertaining to Communicable Disease Control.—Dr. F. M. Smith, Vicksburg.

Discussed by Dr. N. C. Knight. Dr. Smith closed.

Dr. W. H. Scudder presented resolutions on the death of Dr. J. B. Benton, Valley Park, and they were adopted.

The vice president appointed committees for the conduct of annual meeting on Dec. 8 as follows:

BANQUET: Drs. T. P. Sparks, Jr., F. M. Smith, Lippincott, Jones.

OPEN HOUSE: Drs. Jarratt, Sanderson, A. Street, Birchett, Jr., Robert, Herring, Ewing.

AUTOMOBILES: Drs. Clark, Edwards, W. E. Johnston, Lewis, Martin, Jr., Callahan.

OFFICIAL GUESTS: Drs. Martin, Knox, H. H. Johnston, Pool, R. A. Street, Jr.

PAST PRESIDENT'S REUNION: Drs. S. W. Johnston, Parsons, Scudder, Haralson, G. M. Street,

GENERAL RECEPTION. Drs. Purks, Barrier, Birchett, Few, Gaines, H. B. Goodman, H. S. Goodman, Huey, Pettit, W. A. Smith, D. P. Street, Stribling, Wilson.

The vice president appointed as nominating committee as follows: Drs. B. B. Martin, W. C. Pool, W. H. Scudder.

Dr. John H. Dent, Vicksburg, was unanimously elected to membership.

Dr. E. H. Jones, director of the out-patient clinic conducted by the society at the charity hospital reported:

Total number of patients serviced in clinic for month of October 806.

Daily average 26.

Total number of patients serviced in clinic on clinic days for month of October 644.

Daily average 38.

ANNUAL MEETING—DECEMBER 8.

Scientific Program:

Surgical Lesions of the Biliary Tract With Special Reference to Recent Studies in Obstructive Jaundice—Dr. Waltman Walters, Mayo Clinic, Rochester, Minnesota.

Diverticulitis of the Ileum, With Case Reports and Discussion of the Probable Etiology. —Dr. J. M. Mason, Birmingham.

The Diagnosis of Angina Pectoris.—Dr. Whitman Rowland, Crisler Clinic, Memphis, Tenn.

The society will keep open house in the afternoon with planned trips to places of interest for those who wish them. The annual banquet will take place at seven o'clock. The scientific program will follow.

A reunion of past presidents of the Mississippi State Medical Association will be a special feature of the meeting. The following have already indicated that they will be present: Drs. P. W. Rowland, Oxford; C. D. Mitchell, Whitfield; I. W. Cooper, Meridian; T. M. Dye, Clarksdale; Willis Walley, Jackson; F. J. Underwood, Jackson; Henry Boswell, Sanatorium; S. W. Johnston, Vicksburg; W. H. Frizell, Brookhaven; J. W. D. Dicks, Natchez.

Officers of the Mississippi State Medical Association will be honored guests. The following are known to be coming: Drs. Harvey F. Garrison, Jackson, President; W. L. Little, Wesson, president-elect; J. Gould Gardner, Columbia; W. H. Watson, Brandon; H. Lowry Rush, Meridian; W. H. Frizell, Brookhaven, Councilors; J. P. Wall, Jackson, Speaker of the House of Delegates; E. L. Wilkins, Clarksdale, Treasurer; T. M. Dye, Clarksdale, Secretary; W. H. Anderson, Booneville; T. P. Haney, Jr., McComb; N. C. Knight, Clarksdale.

Officers of the Louisiana State Medical Society have been invited and the following have accepted thus far: Dr. H. W. Kostmayer, New Orleans, president; Dr. Roy Carl Young, Covington, La., first vice-president.

ALL MEMBERS OF THE MISSISSIPPI STATE MEDICAL ASSOCIATON ARE CORDIALLY INVITED.

PIKE COUNTY MEDICAL SOCIETY

Dr. A. V. Beacham has located in Magnolia. Dr. Beacham was a Commonwealth Fellow at Tulane and was graduated in 1934.

The following visiting physicians have presented papers before the society during 1936; Dr. John G. Carr, Chicago; Dr. Curtis H. Tyrone, New Orleans; Dr. J. B. McLester, Birmingham; Dr. Horton Casparis, Nashville; Dr. S. C. Jamison, New Orleans.

Officers 1936: R. H. Brumfield, President; J. E. Brumfield, Vice-President; T. B. Abney, Secretary.

ROBERT H. BRUMFIELD,
President

McComb,
Nov. 20, 1936.

COPIAH COUNTY

Dr. and Mrs. J. F. Scarborough, Hazlehurst, recently returned from the Texas Centennial.

Dr. E. H. DeBerry and Dr. C. R. McKee, Hazlehurst, suffered a complete loss by fire of their office equipment early Monday morning, Nov. 2.

Dr. and Mrs. R. B. Zeller, Hazlehurst, are welcoming their second daughter, Josephine Ellen, born Sunday, Nov. 8.

The physicians of Copiah, Lamar and Lincoln Counties very greatly enjoyed the recent series of lectures by Dr. Lapham, held at the King's Daughters Hospital, Brookhaven.

Dr. McGuire, Hazlehurst, and Dr. May, Brookhaven ,recently attended the convention of the American Public Health Association at New Orleans.

R. B. ZELLER,
County Editor.

Hazlehurst,
Nov. 11, 1936.

DESOTO COUNTY

The North Mississippi Medical Society and the Committee on Post-graduate Medical Education had a joint meeting in Graduate Building, University Campus, at Oxford. The names of the essayists insured an exceptionally good program, viz, Drs. W. A. Evans, Robert A. Strong, Lyle Motley and Thos. D. Moore.

Ye county editor while appreciating the kind invitation regrets his inability to attend the annual meeting in Vicksburg of the Issaquena-Sharkey-Warren Counties Medical Society, Dec. 8. Vicksburg is a wonderful place to visit or live. We remember most pleasantly our year's stay there and the medical meetings held there.

The Clarksdale and Six Counties Medical Society meeting Nov. 4 was undoubtedly good; we recall with pleasure attending many meetings of this society as a member in past years.

The secretaries of the above societies are alive and efficient and their courtesy is fine.

Mrs. Kountz, wife of Dr. W. B. Kountz, Washington University, Saint Louis, is visiting her mother, Mrs. Cora Weissinger, relict of the late esteemed Dr. A. J. Weissinger, of Hernando.

Dr. A. V. Richmond, Lake Cormorant, visited Chicago recently.

A happy Christmas and prosperous New Year to all. As Tiny Tim observed, "God bless us all."

L. L. MINOR,
County Editor.

Rt. 4, Memphis, Tenn.
Nov. 11, 1936.

HUMPHREYS COUNTY

Dr. and Mrs. J. A. Wadlington visited their son and daughter, Dr. and Mrs. Eckford Wadlington and family at Florence, recently.

Friends of Mrs. J. B. Barkley are pleased to see her out again following her automobile accident.

Dr. J. C. Higdon has been a patient at the Memphis Baptist Hospital for the past two weeks. His many friends miss him much and wish him a complete and speedy recovery.

Dr. and Mrs. O. H. Beck, Greenville, were recent visitors of Dr. and Mrs. J. W. Jackson.

Dr. and Mrs. J. A. Crawford, Greenwood, were guests of Dr. and Mrs. T. J. Barkley, Isola, last week.

Rev. and Mrs. Baker were visited by Dr. and Mrs. H. King Wade, of Hot Springs, while the latter were attending the convention of the Delta Medical Society at Belzoni.

Dr. W. S. Taylor was a business visitor in Memphis last week.

Friends of Mrs. W. H. Allen will regret to learn of the death of her father, Dr. G. A. Spivey, Oct. 24 at Dallas, Texas.

Miss Demetra Buck, Nashville, Tenn., daughter of Mrs. J. C. Higdon, will be married to Mr. Luper Cole, of Cleveland, Dec. 18.

The meeting of the Delta Medical Society at Belzonia Oct. 14 was a very successful event. The city, business firms including our bankers, those who served at the banquet, and local talent contributed largely towards making the occasion worth while. To Dr. G. M. Barnes goes the credit of getting the program arranged. He is to be complimented for his ability to secure cooperation. The splendid spirit of cooperation of those not in the medical profession is certainly appreciated in such an undertaking. Our local talent is without doubt outstanding as is always evidenced by the remarkable renditions and presentations of those who entertain us during banquets here.

Some excellent papers were read during the business session, Dr. H. King Wade's essay on "Gonorrheal Epididymis" was presented in an unusually interesting way. His simple direct manner of speaking (not reading) his subject is striking. We were fortunate in being honored by a visiting specialist of his caliber.

Dr. E. T. White was selected as our next Delta Medical president. No mistake was made in this selection. He is fair, impartial, nonpolitical, and a hard worker. Dr. J. W. Barkley's popularity was demonstrated by his becoming vice-president of Humphreys County Society. Dr. Barkley, it is up to you!

J. W. JACKSON

Belzoni, Nov. 3, 1936.

LEFLORE COUNTY

Dr. E. R. Nobles, Rosedale, spent Sunday, Oct. 4, in Greenwood.

Dr. Fred Adams, psychiatrist, New York City, visited his brother, Dr. J. C. Adams, Greenwood, Oct. 4-10.

Dr. W. R. Best, Pope, visited in the home of his daughter, Mrs. J. F. Collier, Greenwood, Oct. 5.

Mrs. G. H. Wood, Jr. and son, G. H. Wood, III, wife and son of Dr. G. H. Wood, Jr., of Big Springs, Texas, arrived in Greenwood, Oct. 7, to visit in the home of Mr. and Mrs. Harris Gray, parents of Mrs. Wood.

Miss Eloise Chester, Cruger, daughter of Dr. and Mrs. Chester, was married to Mr. D. E. Nichols, Jr., Greenwood, at Cruger, Oct. 8.

Dr. and Mrs. W. E. Denman, Greenwood, went to Winter Haven, Fla., to be present at the marriage of Dr. Denman's brother, Mr. E. L. Denman, to Miss Myrtis Mann, Oct. 18.

Those attending the recent meeting of the Delta Medical Society at Belzoni were: Dr. and Mrs. J. C. Adams, Dr. and Mrs. L. F. Ferguson, Dr. and Mrs. J. A. Crawford, Dr. and Mrs. L. B. Otken, Dr. and Mrs. R. B. Yates, Dr. Fred Adams, New York, Drs. S. L. Brister, Jr., and W. B. Dickins, G. Y. Gillespie, Jr., Dr. Geo. Baskervill, and Dr. J. C. Pegues.

Dr. and Mrs. C. R. Gillespie, and son, Charles, attended the recent meeting of the U. S. Public Health Association in New Orleans.

Dr. J. H. Hammond, Martinsville, Va., visited his mother, Mrs. S. M. Hammond at Itta Bena, Oct. 21.

Dr. T. B. Holloman, Thornton, was in Greenwood Sunday, Oct. 25, at the opening of the annex to the Greenwood Leflore Hospital.

Dr. C. N. D. Campbell, Sumrall, has returned to Greenwood to enter general practice of medicine again. We welcome him back.

Dr. S. L. Brister, Greenwood, attended the annual meeting of the National Fox Hunters Association at Paducah, Ky., Oct. 26-28.

Drs. J. C. Adams and G. Y. Gillespie, Jr., Greenwood, attended Home-Coming Day at Ole Miss, Saturday, Oct. 24.

Dr. L. B. Otken visited in Batesville Sunday, Oct. 25.

Dr. Geo. Baskervill, Greenwood, visited his sister in Alexandria, La., Oct. 31, returning Nov. 2.

W. B. DICKINS,
County Editor

Greenwood,
Nov. 2, 1936.

PRENTISS COUNTY

Dr. and Mrs. Robert B. Cunningham attended the convocation of the American College of Surgeons in Philadelphia, Pa., Oct. 20 to 26, where Dr. Cunningham was made a fellow of the College. The following week they visited in Washington and Richmond before returning home.

Mrs. L. L. McDougal, Sr., has just returned from a visit to our sons, Dr. L. L. McDougal, Jr., at Providence, Rhode Island, where he is interning, and Dr. Myres S. McDougal, professor of law in Yale University.

Dr. and Mrs. W. H. Anderson are attending the Southern Medical meeting at Baltimore this week.

Drs. W. H. Sutherland and L. L. McDougal, Sr., were the guests of the Alcorn County Medical Society this week where they discussed the possibilities of a Tri-County Tuberculosis Hospital for this section. We expect some definite and constructive work in the near future for this much needed project.

This being the 100th anniversary of old Tishomingo County which is composed of Prentiss, Alcorn and Tishomingo, the doctors through the WPA, have secured a history of practically every doctor who has ever practiced medicine in these three counties. We think this should be done in every county.

L. L. McDOUGAL, SR.,
County Editor

Booneville,
Nov. 20, 1936.

TALLAHATCHIE COUNTY

"Happy days are here again," or at least everybody seems to be in much better spirits. Cotton crops were exceptionally good and prices good.

We Mississippians should be especially thankful for the wonderful crops and especially thankful for such a wonderful President, who by his far-seeing eye and big heart, along with his very efficient cabinet, has put us around the corner from chaos into happiness and prosperity, especially is this true in our Southland.

When the Sardis reservoir has been completed, the people who live in the Tallahatchie basin will enjoy the feeling of relief which has not existed for some years. Heretofore many farmers never knew, when they planted their crops, just when they would be destroyed by high water, and some years the water was so late getting off it was too late to make much of a crop. This is a great farming belt, especially in the western district.

The physicians, especially in the delta, seem to be collecting much better this fall. They look better, are wearing better clothes, riding in better cars, getting rid of debts, which have been haunting them for the past six years and you can just tell a difference in their talk and their walk.

Drs. Powell, Bardwell and myself, of Charleston, Drs. Clay and Backstrum, of Tutwiler, Dr. Harris, of Webb, Dr. Smith, of Sumner and Dr. Denson, of Vance, attended the meeting of the Clarksdale and Six Counties Medical Society which met in Clarksdale, Wednesday from 2 p. m. to 10 p. m. Several physicians from Memphis attended. Dr. Darrington, Yazoo City, past president of the Mississippi State Medical Association, who acted as toastmaster at the evening session and dinner, and Dr. Kostmayer, of New Orleans, who brought us some very interesting discussions, were invited guests. New officers were elected as will be found listed from our secretary's report.

Dr. D. G. Bardwell, Charleston, and J. G. Backstrom, Tutwiler, attended the convention of the I. C. Railway Surgeons, Friday and Saturday in Chicago.

The Tallahatchie County Medical Society and the meeting of the Charleston Hospital staff were postponed from Nov. 5, until Friday 13, as the date conflicted with other meetings.

Mrs. Moody and I attended the homecoming day, with Governor White and his staff at Oxford last Saturday. Governor Leche of Louisiana, accompanied the Loyola football team to Oxford where Ole Miss and Loyola played a very hard contested game, score Ole Miss 34, Loyola 0. The governor and his staff were entertained at lunch by the University cafeteria and at a ball at night by the Cardinal Club.

The writer was confined to his bed for a day last week with a heart attack. The old pump went hay wire and was hard to calm down. Just ate too much at the banquet in Clarksdale, I guess. I am feeling okeh now.

Dr. W. E. Jenkins is able to be out again after being confined to his home for several months where he was nursing a case of rheumatism and neuritis.

Dr. and Mrs. Lacy Biles, Sumner, attended the ball game between Ole Miss and Loyola, at Oxford Saturday.

Dr. J. E. Powell, of Charleston, made a business trip to Memphis today.

J. W. MOODY, County Editor

Charleston,
Nov. 9, 1936.

TIPPAH COUNTY

Those who attended the meeting of the North Mississippi Medical Society at Oxford were well paid in the program given, and should make the resolve to miss as few meetings as possible in the future. Drs. Motley, and Moore, of Memphis, made magnificient presentations of their respective subjects, and we also had the pleasure of again hearing the Great Man of Preventive Medicine, Dr. W. A. Evans, who talked with his usual force and information, to the delight of his hearers.

Tippah was represented by Drs. Mayfield and Handcock, of Blue Mountain, and Adams and Murry, of Ripley. Dr. Handcock is college physician at Blue Mountain College, where she also teaches some classes in public health and allied matters. She was elected as a member in our society.

Dr. A. V. Murry and wife, Greenville, made a visit here Sunday, going back home next morning. Dr. Murry had recently spent some time in Dr. Balyeat's Clinic getting what information allergy played specially in skin diseases, which he is doing in Drs. Gamble Brothers and Montgomery Clinic.

New Albany Hospital is to have its staff meeting tonight and it is to be hoped there will be a good attendance of those who visit this institution.

We have had several cases of scarlet fever in one neighborhood this month, more cases than have existed for many years.

The passing of Dr. Dearman was a great surprise and a loss to his many friends and admirers. He will truly be missed by the profession. He has been, we think, one of "The Big Ten in our conference," and we had great expectations of the service we were sure he was to render the poor unfortunates at Whitfield. Our sympathy truly goes out to those who are so sadly bereft in the going of this fine physician.

We feel also that Mississippi has suffered in the death of Dr. Chamberlain.

L. M. MURRY, County Editor
Ripley, Nov. 10, 1936.

WARREN COUNTY

Dr. Isadore Dyer, of New Orleans, son of the late Dr. Isadore Dyer, has been allocated work at the CCC Camp located in the National Military Park.

Dr. Leon S. Lippincott, it seems, was the only doctor of our county who attended the recent meeting at New Orleans of the American Public Health Association.

Dr. B. B. Martin, Sr., continued that tour to Dallas and the Texas Centennial into the land of the Montezumas. He was accompanied on his recent trip to Mexico City, Old Mexico, by his good wife.

Dr. Sapp, who for some while has been stationed at the CCC Camp at Vicksburg, has given up the work and returned to his home in Florida to resume private practice.

The State Nurses Association this week held and adjourned their annual convention. There was an unusually good attendance and a most significant session. At the banquet they had Dr. W. L. Little, president-elect of the Mississippi State Medical Association, as one of their invited guest speakers. Dr. Little brought them a most encouraging message that was heard with appreciation by two hundred and fifty or three hundred nurses who were present.

Dr. Felix J. Underwood was a speaker on their regular program. We are glad this convention came to Vicksburg and we trust this excellent group of Mississippi nurses was pleased with the meeting here and will look forward with fond anticipation to a day when their convention will return to our city.

As suggested by our editor this becomes our Christmas Edition of *The Mississippi Doctor*, so it is proper for us to send our hearty "Greetings" to the spirit of this journal, to the editors who write and compile, to the doctors who receive and who may read, and to the families of these doctors. The doctor composes the first line of defense in our state against sickness and death; so to one and all of these we send our Christmas greetings. Time passes, customs change, but the spirit of Christmas abides through the ages. As the years go by many of us may become accustomed to Christmas trees, carols, candles, and gifts and permit such to become a commonplace or routine observance. However, perhaps we should never lose sight of the real Christmas spirit as was expressed in Lowell's Vision of Sir Launfal.

"Not what we give, but what we share,
For the gift without the giver is bare.
Who gives himself with his alms feeds three—
Himself, his hungry neighbor, and Me."

So the *alms* that we county editors have given through the months of this year to *The Mississippi Doctor* and its readers have not been so much of literary worth and achievements, as an earnest effort to help, an effort to tell of the joys and sorrows of our respective doctors, their comings and their goings. Sometimes we have written in serious mood, sometimes in humorous mood, but at all times we have given of our time and made these modest endeavors for the success of our journal, the prestige of our profession, for the pleasure, entertainment, and information of our fellow doctors and their families who have patiently read our written words. So again on this memorable occasion we bow our heads in sorrow for those of our profession whose names have been placed in the "Urn of death" and shaken out, "Who shall return no more to his house," and for those who are yet with us and a part of us we extend our sincerest greetings.

H. T. IMS, County Editor

Vicksburg,
Nov. 11, 1936.

WINSTON COUNTY

Dr. and Mrs. W. W. Parks and Miss Maggie Haynes spent the week-end with their son and daughter, Mr. and Mrs. Walton Owen, Osceola, Ark., and while there visited many interesting points in Arkansas and Missouri.

Dr. and Mrs. E. L. Richardson and daughters, Mrs. John Steward Fair and Miss Elizabeth Richardson, and his brother, Ben Richardson attended the funeral of Mr. Joe Lightcap, a nephew of Mrs. Richardson, at Yazoo City last week.

Dr. T. C. Suttle was in the city this week on business.

Dr. C. A. Kirk, of Mashulaville vicinity, was in the city hunting hands to pick cotton. He said he could not get pickers and had about 40 bales to gather.

Dr. T. F. Kilpatrick, Noxapater, was on the streets this week.

Dr. H. B. Watkins has been on the sick list a few days, but is better.

M. L. MONTGOMERY,
County Editor

Louisville,
Nov. 9, 1936.

DR. JOHN FLEMING CHAMBERLAIN

Dr. John F. Chamberlain, died suddenly Oct. 26, following a heart attack, at Natchez, where he was born and where he had spent his life.

He was born Sept. 20, 1877, the son of Charles T. and Mary Fleming Chamberlain. He received his degree in medicine from Tulane in 1906.

Dr. Chamberlain is survived by his wife, one daughter, Miss Clara Chamberlain, and two sisters, Mrs. W. T. Jones and Miss Annie B. Chamberlain, and two sisters, Mrs. W. T. Jones and Miss Annie B. Chamberlain.

The medical profession has lost an outstanding member and Natchez an outstanding citizen.

HOSPITAL STAFF TRANSACTIONS

NORTHEAST MISSISSIPPI HOSPITAL STAFF MEETING

The Northeast Mississippi Hospital Staff met Nov. 2 and elected officers for the ensuing year as follows:

Dr. R. H. Christian, President; Dr. H. B. Sutherland, Vice-President; Dr. R. B. Cunningham, Secretary and Treasurer; Dr. L. L. McDougal, Sr., Reporter.

Our attendance for the year has not been as good as it should be but we are determined to make it better. We can promote our cause only by personal contact, association, good understanding and cooperation. Our collections have been the best for many years and we approach Thanksgiving Day thankful for these blessings and believing that we are second to none when it comes to professional good feeling for each other.

L. L. McDOUGAL, SR., Reporter.

Booneville,
Nov. 20, 1936.

VICKSBURG SANITARIUM

The regular monthly meeting of the staff of the Vicksburg Sanitarium was held Nov. 11, and after a supper served at 6:30 p. m., was called to order by the president, Dr. J. A. K. Birchett, Jr., with thirteen members and three guests present.

Special Case Reports:

1. Osteomyelitis of Tibia Complicated by Carcinoma.—Dr. J. A. K. Birchett, Jr.
2. Hypertrophic Muscular Dystrophy.—Dr. G. C. Jarratt. Selected Roentgen Ray Studies were demonstrated and discussed as follows: Sarcoma of Tibia; Hip Joint for Discussion; Pulmonary Tuberculosis (3 cases); Cholelithiasis; Perforating Gastric Ulcer; Nephrolithiasis; Double Renal Pelvis.

Three Minute Reports of the Literature of the Month were presented as follows:

Dr. L. S. Lippincott—A Study of the Value of Vaccination Against Whooping Cough.

Dr. J. A. K. Birchett, Jr.—Acute Pelvic Appendicitis.

Dr. L. J. Clark—Differentiation of Pick's Syndrome and Congestive Heart Disease.

Dr. G. C. Jarratt—Use of Protamine Insulin in Children.

Dr. R. A. Street, Jr.—Treatment of Uterine Bleeding.

The next meeting of the staff will be held Thursday, Dec. 10.

ABSTRACT: OSTEOMYELITIS OF THE TIBIA COMPLICATED BY CARCINOMA

Dr. J. A. K. Birchett, Jr.

Patient.—White, male, age 49.

Chief Complaint.—Open ulcer on left leg just above ankle, with discharging sinus.

History of present complaint.—Twenty years ago had a compound fracture of left tibia which has never healed; profuse discharge of pus since that time. Has had several operations for removal of dead bone but each has left the open raw surface larger and the drainage more profuse. For past three or four years has had no medical care; taking care of leg himself by soaking in lysol solution and dressings. Ulcer has begun to cause pain and swelling.

Physical examination.—Well developed and nourished. Ulcerated area at surface of left lower leg with crater formation and raised indurated edges. Purulent material is continuously welling up into ulcer. Evidently opening of discharging sinus from diseased bone in tibia.

Family history.—No tuberculosis or cancer.

Roentgenologic examinations.—Extensive osteomyelitis of tibia.

Clinical laboratory.—Wassermann, Kahn, Kline and Young, and Eagle flocculation tests negative; no abnormal urinary findings.

Procedure.—Advised removal of ulcer and curettement of dead bone. This was done. Osteomyelitis of tibia extensive. All sinuses curetted and dead material removed. Wound packed with gauze.

Biopsy showed squamous cell carcinoma and amputation advised.

Amputation was attempted well above the lesion but below the knee. There was much induration of the muscles and interosteous membrane, suggestive of possible malignancy. Therefore, site of amputation was selected above knee. In this region tissue was apparently normal and guillotine amputation was done.

Patient discharged on 20th postoperative day with wound healed.

WATER VALLEY HOSPITAL STAFF MEETING

1. Business meeting: Minutes of last meeting.
2. The Early Recognition of Acute Appendicitis.—Dr. George Brown.
3. Report of an Obscure Case.—Dr. S. E. Cooper.
4. Recent Advances in Radiology, with Demonstration of the Following Roentgen Ray Studies: 1. Cholelithiasis. 2. Pulmonary tuberculosis. 3. Sacralized fifth lumbar transverse process. 4. Fracture of the ilium with dislocation of hip. 5. Osteomyelitis of humerus.
5. Luncheon.
6. Adjournment.

Staff meetings are held at the Water Valley Hospital each month on the 3rd Thursday. Programs will be mailed out. You are cordially invited to attend and take part in the discussions.

WOMAN'S AUXILIARY

TO THE

MISSISSIPPI STATE MEDICAL ASSOCIATION

AUXILIARY CHRISTMAS LUNCHEON

Red candles in silver holders illuminated the long luncheon tables at the monthly meeting of the Woman's Auxiliary to the Central Medical Society yesterday at noon at the Edwards hotel. Mrs. Temple Ainsworth, president, presided over the meeting, which was one of the most beautiful ever held by the Auxiliary.

At the bases of the candlesticks, placed at intervals down the tables, were clusters of silvered pine cones, and as centerpieces the tables held bowls of Chinese tallow. Christmas decorations of red and green were used in the hotel convention hall, where the luncheon was held.

Members were received by four charming hostesses who had planned the decorations and made other arrangements for the luncheon. They were Mrs. F. L. Van Alstine, Mrs. H. C. Ricks, Mrs. J. A. Milne, and Mrs. George Owens. Mrs. W. E. Noblin, Jr., and Mrs. J. L. Hall, both of Jackson, were welcomed as new members.

Those present were: Mrs. H. C. Ricks, Mrs. F. L. Van Alstine, Mrs. Harvey Garrison, Sr., Mrs. J. A. Milne, Mrs. O. T. Carr, Mrs. F. J. Underwood, Mrs. C. F. McKenzie, Mrs. George Adkins, Mrs. R. C. O'Ferrall, Mrs. John Howell, Mrs. Nelson and Mrs. C. C. Smith, all of Canton; Mrs. George Hall, Mrs. J. L. Hall, Mrs. N. C. Womack, Mrs. R. M. Currie, Mrs. Temple Ainsworth, president, Mrs. J. O. Segura, Mrs. Walton Lipscomb, Mrs. Fred Hollowell, Mrs. W. E. Noblin, Jr., Mrs. W. F. Hand, Mrs. T. E. Wilson, Mrs. Robin Harris, and Mrs. W. F. Henderson.

DELTA MEDICAL AUXILIARY

The ninth semi-annual meeting of the Woman's Auxiliary to the Delta Medical Society convened at the Methodist Church in Belzoni, with Mrs. H. L. Cockerham, president, presiding.

Mrs. G. J. Mancill, Indianola, very charmingly welcomed the guests. In the absence of Mrs. J. C. Pegues, Mrs. J. A. Crawford responded.

Prof. V. P. Brooks, Supt. of Belzoni school, gave an informal but interesting talk.

Mrs. J. C. Bell, Belzoni, secretary of Humphreys County Unit, reported they had built two tuberculosis huts that were already in use.

The following officers for 1936-37 were elected: Mrs. J. C .Higdon, Belzoni, pres.; Mrs. R. E. Wilson, Greenville, vice pres.; Mrs. J. A. Wadlington, Belzoni, vice pres.; Mrs. Barnett Cottrell, Indianola, vice pres.; Mrs. J. A. Crawford, Greenwood, vice pres.; Mrs. J. L. Nichols, Alligator, vice pres.; Mrs. J. C. Bell, Belzoni, parliamentarian.

A delicious plate was served members of the Auxiliary at the home of Mrs. Powell. Following this was a bridge party and at 7:30 a banquet was enjoyed by both doctors and their wives.

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The Mississippi Doctor

VOL. 14. BOONEVILLE, MISSISSIPPI, JANUARY, 1937 NO. 8

VISION has ever been the guiding angel of mankind; throughout history it has always been the man of vision who has led. No progress has ever been made without it, and a nation's greatest assets are its men of vision, whether educators, statesmen, inventors or industrialists.

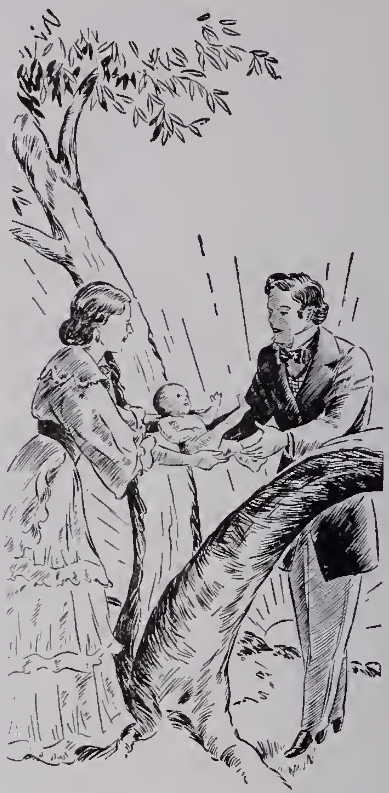
—J. G. JONES

Old Way . . .

CURING RICKETS in the CLEFT of an ASH TREE

FOR many centuries,—and apparently down to the present time, even in this country—ricketic children have been passed through a cleft ash tree to cure them of their rickets, and thenceforth a sympathetic relationship was supposed to exist between them and the tree.

Frazer* states that the ordinary mode of effecting the cure is to split a young ash sapling longitudinally for a few feet and pass the child, naked, either three times or three times three through the fissure at sunrise. In the West of England, it is said the passage must be "against the sun." As soon as the ceremony is performed, the tree is bound tightly up and the fissure plastered over with mud or clay. The belief is that just as the cleft in the tree will be healed, so the child's body will be healed, but that if the rift in the tree remains open, the deformity in the child will remain, too, and if the tree were to die, the death of the child would surely follow.



It is ironical that the practice of attempting to cure rickets by holding the child in the cleft of an ash tree was associated with the rising of the sun, the light of which we now know is in itself one of Nature's specifics.

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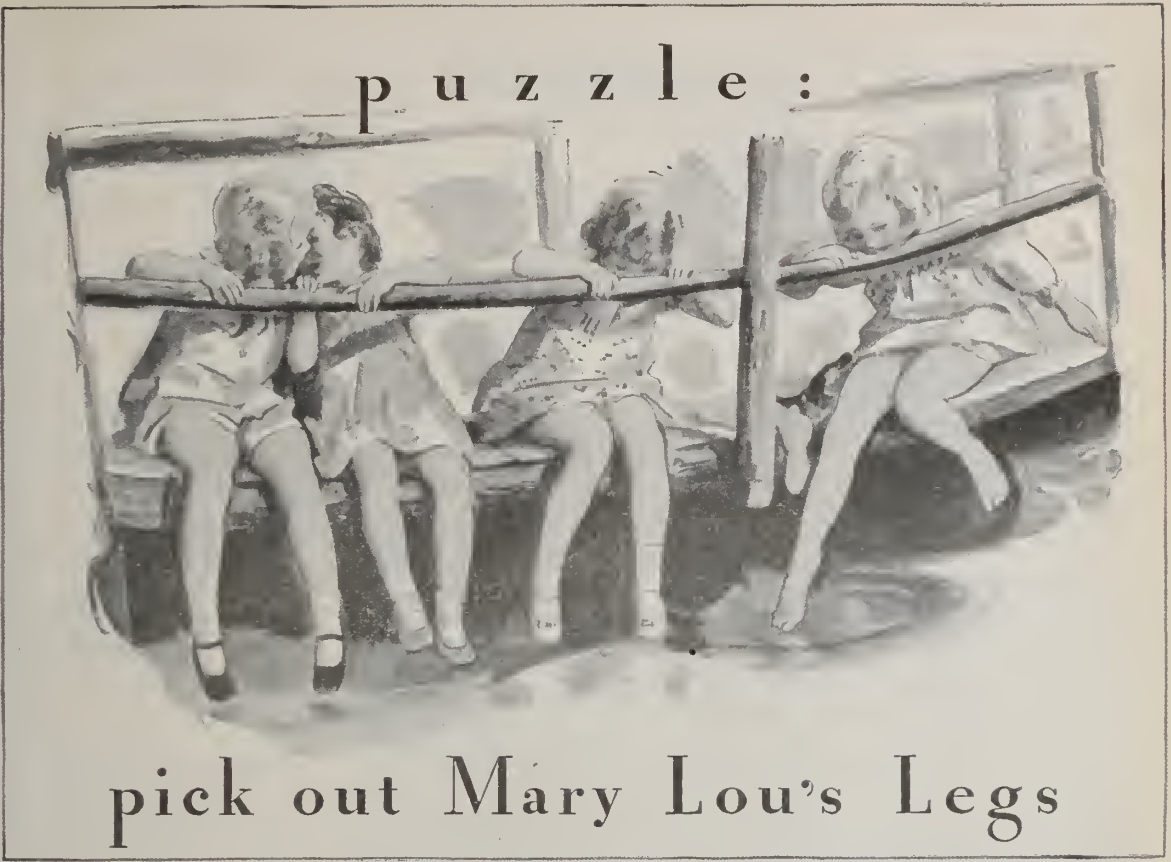
*Frazer, J. G.: The Golden Bough, vol. 1, New York, Macmillan & Co., 1923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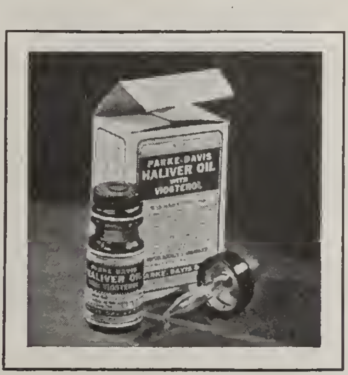

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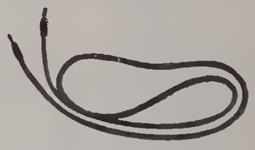

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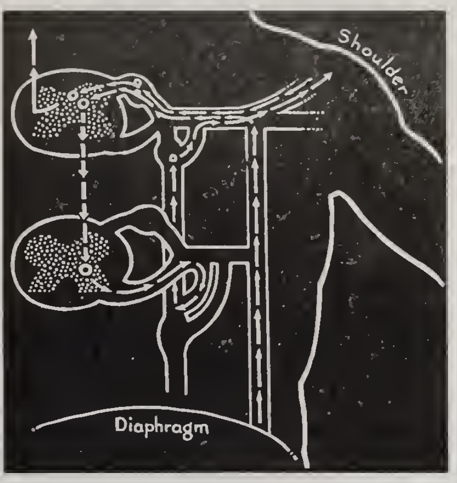

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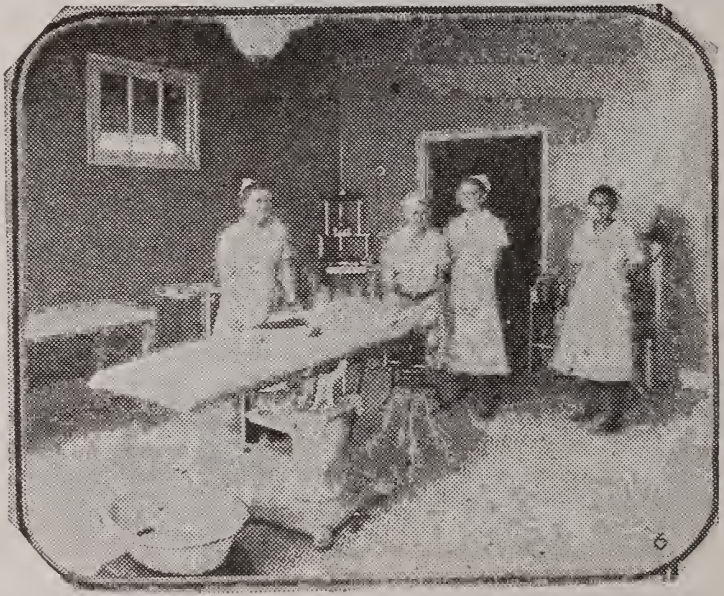

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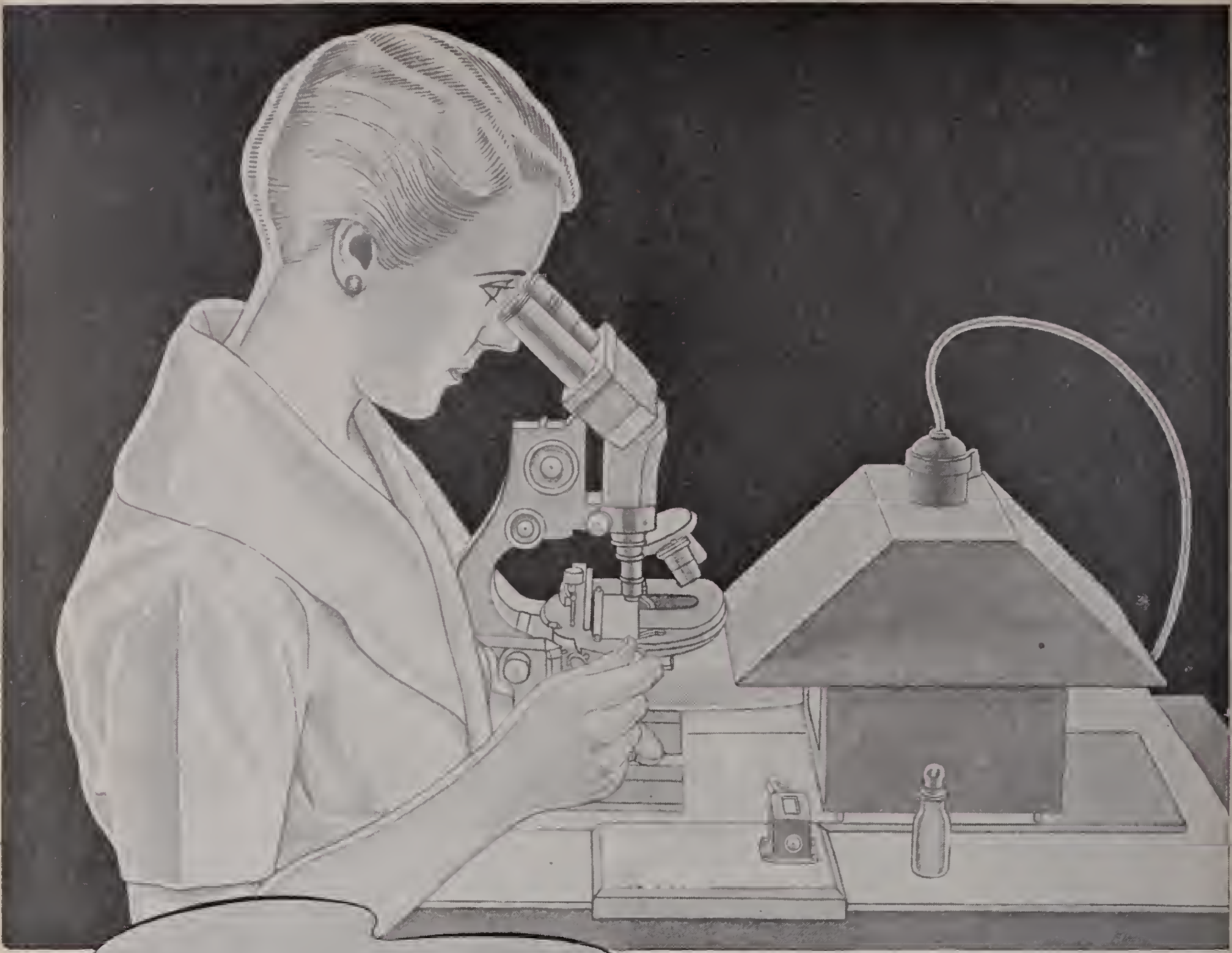

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A Review of Certain Disturbances About the Epiphyses and Joints of Children Commonly Unrecognized in Their Early Stages

F. C. KIDNER, M.D.
DETROIT, MICH.

THERE is a number of pathological changes in the epiphyses and joints of children which are frequently unrecognized in the early stages of their development. Some of these are self limited and do not produce disability, even if untreated. Others, if they are not properly treated, lead to lifelong disability, often accompanied by considerable suffering. It is important, therefore, that all physicians should be familiar with these changes, and should be prepared to recognize their symptomatology so that early and efficient treatment may be instituted. Early treatment is essential to successful treatment.

These conditions can be divided into three classes; 1. Epiphyseal dyscrasias which commonly are called "epiphysitis" or "osteochondriti". The cause of these conditions is not known, but it probably rests on metabolic changes which lead to abnormal blood supply and nutrition of the growing epiphyses. Traum, infection and endocrine disturbances undoubtedly play their part in causing the abnormalities. 2. Epiphyseal and synovial infections, of which the most common are tuberculosis and pus forming organisms. 3. Autonomical Changes. Class 1 includes a series of changes in the different epiphyses which tend to disturb their growth and lead to the deformity of the bone involved, which in turn leads to the mechanical maladjustment of the adjacent joint. Such mechanical maladjustment of a joint is invariably accompanied by altered function, and in the end produces pain. These conditions are essentially similar in cause and progress but, because they have been recognized or described by different individuals at different times, it has come to be a habit to regard them as separate entities. To most of them the name of the individual who first described them has been attached.

The pathological process in each is, first absorption of calcium from the growing nucleus of the epiphysis; second, degenerative changes in the cartilage of the epiphysis; and third—errors of growth of the cartilage columns in the epiphyseal line. For years a few of us thought that these changes were due to low grade blood-borne infections, but the weight of evidence now points to loss of chemical balance from metabolic or endocrine disturbances, perhaps influenced by local trauma.

Classes 2. Synovial or epiphyseal infections due to tuberculosis or pus forming organisms are more easily understood from the pathological point of view. They are more common but it is often difficult to diagnose them and they may be confused with cases belonging to Class 1.

Class 3 includes a large number of congenital deformities such as club foot, dislocation of the hip, and pre hallux or accessory tarsal scaphoid of which only the last will be described.

By means of slides these pathological changes were demonstrated and the essayist described their symptoms and signs with their treatment.

Analysis of the History in the Diagnosis of Reduced Cardiac Reserve*

OSCAR W. BETHEA, M.D.
Professor of Clinical Medicine, Tulane School of Medicine
NEW ORLEANS, LA.

Within a few brief years, more than one-third of us here present will be dead of heart disease. Of the last 3,000 deaths of physicians reported in this country more than 1,000 were from diseases of the heart, so this condition is important to us not only as custodians of the health of others, but also from a personal standpoint. Just why a larger percentage of victims are claimed from our ranks than from other groups has not been satisfactorily determined. Our interest, however, is certainly more than academic.

Heart disease has been defined by Herrmann[1] substantially as any condition that reduces cardiac reserve. Lewis[2] tells us that when the individual is at rest the normal heart is doing only about one-tenth of the work of which it is capable. This balance of potential work, therefore, constitutes a reserve of about 90 per cent. We may think of the heart as comparable to a business, for example, a small sanitarium where the operating expenses are normally $1,000 a month and a balance of $9,000 is carried in the bank. The enterprise can weather a period of reduced income or increased expenditure without inconvenience; but, if the bank reserve is much reduced, it will sooner or later reach that point where any unusual development may cause financial embarrassment. Wright[3] tells us that the heart of the normal young person during stressful activity may pump six times as much blood as when the same person is at rest, and Barr[4] has estimated that the normal heart has so much more reserve than the other structures of the body that it is practically impossible for physical activity to cause injury to it, since the other structures, as the leg muscles, having less reserve, will fail first. We are more and more inclined to think of the status of the heart in terms of this reserve, and to get further away from the old emphasis upon details such as stenosis of a value here or an incompetence there.

If one of you employed a laborer to do some work, you would not be concerned so much as to whether he had a finger missing or a flat foot or defective chewing facilities, as you would as to whether or not he was competent and could carry through the work assigned to a successful conclusion; in other words, whether he was, as a whole, efficient. Now the important factor in regard to the heart is its efficiency.

There are many approaches to the investigation of the condition of the heart and all of them have a degree of importance. These include a physical examination especially to discover those objective findings that are known to result from impaired cardiac efficiency. The laboratory study should be complete, including of course, a blood Wassermann and a basal metabolic reading, and also an X-ray of the chest taken preferably at six feet and with the patient standing. The electro-cardiogram is proving of more value as new technique is developed in making the records and additional experience employed in their interpretation. There are various heart-function tests that are simple, inexpensive, and may be informative, and these should not be neglected.

To me the most valuable data obtainable is that secured from the analysis of the history of the case, and, as has been said of a smile, "it is worth a million dollars and doesn't cost a cent."

History. The family history may disclose important information, particularly with regard to a predisposition to early deaths from heart disease. I believe that heredity touches every phase of life. We see family groups in which a large percentage of them have inherited scalps with a low resistance to conditions that result in baldness; others in which only a few natural teeth are remaining by middle life; and it seems logical, therefore, to postulate that many families hand down hearts with a low resistance to the wear and tear of life. The family history should be routinely searched for traces of syphilis. These include especially a history of children dying in early infancy, still births, abortions, early deaths from apoplexy, etc. The social history should include a study of the patient's use of alcohol, tobacco, and caffeine beverages; the vocation of the individual; and his habits as to activity, rest, and excesses of any kind. Is the patient a driver of others and self or is he driven?

---

*Address delivered before 7th District Medical Society, St. Charles, Louisiana, Nov. 5, 1936.

The history of past illnesses is indispensable. It should include particularly information as to epidemic influenza, rheumatic fever, and syphilis, also diphtheria, scarlatina, tonsilitis, and gout. I wish to stress particularly the possible importance of epidemic influenza. Within the past two decades mortality from circulatory diseases has increased much over 100 per cent. The last report that I had from New Orleans showed 128 per cent increase. What has happened in the last two decades that has been a major contributing factor? I see no appreciable increase in dissipation, stressful activity, worry, or any other new development except the pandemics of influenza and the limitless number of sporadic cases since 1918. We all saw cases of circulatory deaths at the time of sickness. Some died a few weeks later, some a few months, some a few years. "It is happening thus around us every day."

It is the analysis of the subjective symptoms reported by the patient that I wish to present for particular study. I shall not discuss advanced decompensation, such as congestive heart failure, but I shall consider only the case of moderately reduced cardiac reserve, that was once termed "failing compensation" and not "decompensation."

Christian[5] classes a carefully made history of symptoms in relation to exercise as the most valuable basis for estimating cardiac efficiency. Herrmann[1] states that the patient's reaction to the ordinary activities of life is the most accurate and rational test for cardiac function. The old master, Sir James McKenzie,[6] advised against laying too much stress on the use of the stethoscope. He said, "there are no grounds for supporting the view that the efficiency of the heart can be inferred from any particular character of sounds." Rudolf[7] suggests that the stethoscope, by concentrating our attention on murmurs, has possibly resulted in much harm. It will help us to understand the following discussion if we will keep in mind a few suggestions that seem to me to be well-founded on experience.

White[8] estimated that 74 per cent of his cases showed evidence only of left ventricular strain so he urges against our expecting visceral congestion in a large percentage of these cases. Copeland,[9] in his most excellent study, divides signs of a failing heart into (1) those resulting from a failing right heart with congestion of the liver, spleen, etc., and (2) those resulting from failing of the left heart with pulmonary-cerebral symptoms. In other words, the failing right ventricle, by being unable to propel the blood forward, results in systemic congestion and a relative pulmonary anaemia. The failing left ventricle tends to result in pulmonary congestion and systemic anaemia. Of course many of these cases, as we see them show evidences of incompetence of the heart as a whole. I have acquired the custom of including fifteen questions in my "special heart history" of the "present status of these patients."

Breathlessness. Lewis[2] classes breathlessness as the earliest and most valuable symptom. In one of his last classic gems of literature McKenzie[6] says, "distressful sensation arises when effort is made beyond a certain limit in persons with healthy hearts, as well as in those with damaged hearts. In those with healthy hearts the distressful sensation is one of breathlessness as a rule, though in a few persons there is a sense of constriction across the chest which almost amounts to pain. When from any cause gradual heart failure sets in, the symptoms are the same, but produced by slighter effort." Smith[10] feels that breathlessness is only significant when compared to the individual's normal response to the given exertion, as some naturally have a low exercise tolerance. We must be sure that the patient understands what we mean by breathlessness, "shortness of breath" may be better understood. We must not be content with investigating the reactions of the individual to one activity only. For example, with a physician is there a tendency to breathlessness on climbing the stairs in his home, or performing a certain operation, or walking an accustomed distance? The significant information is whether the discomfort is more than it was last week or last month or last year. We must take into consideration advancing years and especially increasing weight, the latter requiring additional effort for the performance of the same activity. We must also eliminate the possible results of anemia and from such factors as reduced respiratory capacity as would result from bronchiectasis, pleurisy, etc. I believe that either the right or the left ventricle or both may be a factor in the development of this symptom.

Fatigue. Wiggers[11] has emphasized the frequency with which this is an early development. Here again we must allow for increasing weight, also for impaired walking facilities, or for anything else that might be a contributing influence. The physician who has been accustomed to leave his office at five o'clock in the afternoon feeling like a million dollars finds that toward the latter part of the period there is an increasing tendency to sit down, and often he reaches that point where he resents seeing another patient walk in. The housewife who has been having her affairs all in condition and looking forward with pleasure to the return of husband and children for the evening meal finds herself dreading the approach of the family gathering as her work has not been done or has been completed at a sacrifice. McKenzie has urged that we evaluate fatigue from the standpoint of the comparative ease with which the individual continues to do those things that he is accustomed to doing.

Recuperation. Barr[4] has called attention to a not infrequent delay in the return to normal from fatigue. I recently joined a freshman class in our school to take seventy-five lectures in subjects that had developed materially since my preclinical days. It was on the fourth floor of the building, and not being used to stair-climbing to this extent, I was interested to note that my complete recuperation required about five minutes. I was also delighted at the recollection that when I had lectured in that same room twenty-odd years ago, I allowed myself five minutes' rest before facing the class.

Palpitation. We might discuss this as a consciousness of heart activity. Everyone is subject to this under certain conditions. It is significant only when it develops under slight or no provocation or, let me say, under conditions that formerly did not result in this manifestation. I frequently have patients complain of this discomfort if they lie on the left side when first going to bed. This has seemed to me to be particularly noticeable in smokers—those who smoke excessively near bedtime. I hope that it has no material significance. Our investigations must determine what precipitates palpitation.

Post-sternal discomfort. I am not referring here to definite pain but to that sense of weight or oppression that many of us regard as so significant of heart trouble. I have had the sensation described as being that of food having lodged in the esophagus. One patient recently claimed that he felt as though an elephant were sitting on his chest. Whether there is an elephant or a mouse, it requires careful investigation. I agree with Lewis[2] that discomfort in this area is more suggestive than if experienced in the nipple region. We must determine what precipitates it. We find particularly as factors

(1) Mental Stress
(2) Physical exertion
(3) Chilling of the body
(4) A full meal

In the last named condition we must be careful to eliminate ordinary indigestion.

Chest Pain. I have separated this from precordial discomfort and what I include here is more particularly pain on the left side of the chest. We know that it may also be felt in the epigastric region near the left costal angle, in the left shoulder, along the left sterno-mastoid muscle, down the left arm, and in various other areas. It may be a definite pain of varying degree or only a sense of constriction or numbness. Pain to the left of the nipple has seemed to me to have less significance. It is here particularly that complaint is often located by smokers and by children after strenuous activity. It is of particular significance if the condition is of recent development, or progressive in character. Here again the usual exciting factors are mental stress, physical exertion, chilling of the body, and a full stomach. One or more of these factors may be operative together. I remember one patient, a banker, experienced his first attack during a period of financial stress when, after a full meal, he started to walk to his office on a cold day in the face of a heavy wind. Later this developed to where any one of these factors might precipitate an attack.

Elevation of Head for Sleeping. I enter this under the head of "pillows." How many pillows do you use for sleeping? How many did you use last month? Last year? Are the pillows the same size that you have been using? It seems reasonable that this tendency to elevate the head for sleeping is caused by cerebral congestion resulting from impairment of the right heart.

Sleep. We determine here as to whether or not the patient is sleeping as well as formerly, and if not, the cause of the insomnia. We must first take into consideration any changes in the environment or any other factors that might have an influence. I believe that here also it is the right heart that is usually at fault.

Mental Efficiency. Eggleston[12] has stressed the frequency with which impairment may be an early symptom. It may be necessary to obtain this data from the family or from business associates, though the patient may often give us the necessary data in answering the questions as to his ability to concentrate and to remember figures, business appointments, telephone numbers, etc. Does the lecturer find himself inclined to use notes when he formerly spoke from memory? Must the physician refer more frequently to his office records in consulting with his patients?

Nervousness. Here again we may have to obtain the information from others, especially the family, as an individual may force himself to keep his poise in the presence of his business associates and let down when he reaches the sanctuary of his home. It has seemed to me that this symptom usually takes the form of impatience and irritability. I believe the right heart is mainly at fault.

Vertigo. Many apparently normal individuals are affected by this symptom. The questions are: Is it a recent development in the patient before us and is it getting progressively worse? I attribute it to left ventricular impairment resulting in a relative cerebral anemia.

Nocturia. Strauss[13] has been much interested in this as an early clue to reduced cardiac efficiency. Wright[3] tells us that the normal kidney is ordinarily doing only 1-8 of the work of which it is capable. The kidneys of an individual are able to do the work thrown upon them by the intake of water and nourishment during the day and to a certain extent to loaf at night. Mosenthal based his classical test on the fact that the damaged kidney had to work more or less steadily throughout the twenty-four hours. In the case of the patient with a failing heart, nocturia results not from impairment of renal structure, but from a faulty renal circulation. In right ventricular failure there is congrestion and there may be albumin, casts, and other evidences that may lead to a diagnosis of nephritis as Lewis[2] has repeatedly emphasized. When the left ventricle is impaired, the tendency is to an insufficient blood supply and urine that is normal to laboratory study.

Edema. We refer particularly to the afternoon edema, especially in the lower extremities. The patient may be normal when examined, and sometimes it is rather difficult to elicit information as to a slight degree of involvement. I determine if the shoes seem tighter at night or in the morning. I have obtained correct data by asking the patient if he ever unlaces his shoes the latter part of the day to obtain comfort. The right heart is usually at fault.

Cough. This is an evidence of beginning pulmonary congestion resulting from impairment of the left ventricle. The cough is usually dry and hacking in the beginning; later it may become productive. McKenzie[6] has called our attention to the fact that a transient, crepitant rale at a pulmonary base is often one of the first findings upon physical examination.

Gastric Disturbance. With a failing right heart and visceral congestion the stomach may be expected to participate in the impairment. Among the first signs are anorexia and indigestion.

In making a history such as I have outlined, unlimited time may be spent, and often is not only justified, but necessary. I wish to say, however, that not only the time involved but the space required on the history sheet may be quite limited, and often such curtailing is necessary. I give here a history as it appeared on my records when I had only a few minutes to examine the patient preparatory to presenting her before one of my classes at a clinical lecture on heart disease.

Breathlessness + +
Palpitation +
Pillows 0
Vertigo 0
Fatigue +
Post-sternal Discomfort 0
Sleep +
Nocturia ½

Edema +
Cough 0
Recuperation ?
Chest Pain 0
Nervousness +
Gastric 0
Mental 0 (?)

It is not claimed by me that the analysis of the history is infallible in diagnosing the condition under discussion, but I do believe that if this plan is carefully followed year after year that one eventually acquires a proficiency in securing facts and interpreting the sum total of the data obtained to the extent that the history will constitute a valuable part of our diagnostic armamentarium, and often will give more information than all other sources of investigation combined.

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Endocrine Aspects of Gynecology*

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No especial apology need be made for the subject of this lecture, for endocrinology has established itself so thoroughly that it must now be reckoned with by practitioners in all branches of medical science. Its growing importance in the field of internal medicine needs no emphasis, nor its indispensability to the practicing surgeon. But in no field are its implications more clearly manifest and more fundamental than in that of gynecology. There are two reasons for this:

The first of these is the fact that some of the most brilliant endocrinologic advances of recent years have been in the field of reproductive physiology, and these advances have been directly applicable to many gynecological problems. The second reason is the great frequency of the so-called functional gynecological disorders, so that an ever-increasing number of women's ills are being made explainable by the results of experimental laboratory investigations. Show me a gynecologist who takes no stock in endocrine research, and I will show you a purely mechanical gynecological surgeon. On the other hand, the man who has the intelligence and wisdom to appreciate the importance of the endocrines in the interpretation of gynecological problems is quite sure to be one who practices gynecology on a scientific, broadly biologic basis which makes the specialty, as its name indicates, really the science or study of woman.

So rapid and kaleidoscopic have been the advances in reproductive physiology that one might readily write an altogether new paper certainly every year on the title which I have selected. This is not the place to review the history of our knowledge on this subject, and I have done this elsewhere. In the present paper my object will be merely to point out how some at least of this new knowledge touches upon the daily life of the gynecologist, as well as the general practitioner, who is called upon to treat so large a proportion of women with the so-called minor gynecological ailments, so often functional.

I shall disappoint those who expect rules-of-thumb for the endocrine treatment of gynecological disorders, for it may as well be confessed at the very onset that the accomplishments of endocrine therapy in the gynecological field have thus far been as a whole disappointing. The chief reward of an interest in endocrinology at the moment is in the more intelligent approach it gives to many of our clinical problems, although there can be little doubt that the therapeutic reward will follow in due time. One of the blessings conferred by the newer knowledge of the endocrines has been to show the incorrectness and often the absurdity of the older explanations and methods of organotherapy.

It would be stark truism to urge that we cannot intelligently discuss abnormalities of function unless we know the normal mechanisms, so that I propose first to discuss in the simplest possible fashion the role of the hormones in the normal reproductive cycle. To one who is at all familiar with this, it is not necessary to emphasize what is sound and rational in organotherapy, and what is unsound and irrational.

What, for example, are the hormones concerned in menstruation? The ovarian hormones immediately concerned with the process are folliculin (theelin, female sex hormone) and progestin. The first of these is the product of the maturing graafian follicle, though it is also secreted by the corpus luteum into which the collapsed follicle is metamorphosed after the discharge of the egg. The latter process (ovulation) occurs usually about half way between menstrual periods, in the case of women cycles of about 28 days, though there are many individual variations in either direction, as will be emphasized later. The second ovarian hormone is progestin, the characteristic hormone of the corpus luteum, and, so far as we know, produced only by that structure. Folliculin, therefore, is present throughout practically the entire cycle, while progestin is found only in the post-ovulatory phase.

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What effects are produced by these two substances upon the uterine mucous membrane? The effect of folliculin is to produce increasing growth changes and hyperemia, while the special function of the progestin is to bring about secretory changes in the gland epithelium. It therefore follows that such secretory changes are never present before ovulation, and that they are never present when ovulation has failed to occur, as we shall see is the case in certain well-known disorders.

What is the cause of the actual bleeding of menstruation? The immediate cause, of course, is the breaking down and desquamation of the endometrium, associated with actual opening up of blood vessels and probably an increase in their permeability. What, however, is the endocrine cause for this catabolic process? The evidence seems quite convincing that this is due to the sharp withdrawal of the folliculin supply to the endometrium. There is a steady increase in the growth and hyperemia of the endometrium as the cycle advances, up to a certain point, probably a day or two before the actual onset of the flow. At this point the further production of folliculin is sharply inhibited, and the props are, so to speak. knocked from beneath the endometrium, which thus undergoes partial destruction and is cast off, with menstrual bleeding as a manifestation. I state this view quite arbitrarily, but it is supported by a wealth of evidence, as I have elsewhere shown.

What factor is it that brings about the rather abrupt inhibition of folliculin production which is responsible for bleeding? Here again, for purposes of brevity, I shall omit controversy, merely urging that the evidence indicates that the responsible mechanism is dependent upon the reciprocal relations existing between the secretory activity of the ovaries and that of the anterior hypophysis. The latter, as has been clearly established by the work of Smith and Engle in this country and that of Zondek and Aschheim in Germany, is the power behind the ovarian throne. The sex hormones of the anterior hypophyseal lobe are essential to the maturation of the follicles and the production of folliculin (Prolan A effect), and also for the conversion of follicular epithelium into lutein cells (luteinization) and the production of progestin (Prolan B effect). Whether Prolan A and Prolan B are two different sex hormones or whether they represent merely different phases of activity of a single hormone is still unsettled, and the question need not be further discussed here. But that two types of effect of the anterior hypophysis are elicited permits of no doubt.

Dominating as the anterior hypophyseal endocrine effect is, however, it is subject to at least a measure of retaliation from the ovary, for it has been shown that the ovarian hormones exert a reciprocal effect upon the pituitary endocrine function. For example, it has been shown by Moore. Hisaw and others that a sufficient dosage of folliculin inhibits the production of the pituitary sex hormone. In the normal cycle, therefore, when the production of folliculin reaches a sufficiently high point, as it does shortly before menstruation, there occurs an inhibition of the pituitary principles which motivate folliculin production, and a sharp drop in folliculin results, with menstrual bleeding as a consequence. The mechanism, therefore, is not unlike that employed in the thermostat arrangement of the heating systems in our homes. The hypophyseo-ovarian relationship thus appears to be an automatic, self-regulatory one, and this concept is applicable to many of our gynecological problems, especially that of functional bleeding.

For example, it is not unusual, in taking careful gynecological histories, to find that slight, or at times fairly free bleeding is observed about midway between menstrual periods. That similar intermenstrual bleeding, either macroscopic or microscopic, is quite constant in monkeys as has been shown by the work of Hartman. The time at which the bleeding is noted is just after the rupture of the follicle, when a temporary drop in the folliculin level occurs, and it is this drop which brings about the staining. Sometimes the latter is so free that is stimulates a menstrual period, so that the woman apparently menstruates twice a month, on flow following ovulation, the other dependent on the folliculin drop incident to the functional withdrawal of the corpus luteum.

One other very important form of gynecological bleeding is explainable along similar lines. I refer to the so-called functional type of uterine bleeding, so common in women at or near the menopause, but often seen at puberty and during adolescence, though it may arise at any age during the reproductive epoch. In this disorder the maturing follicle does not rupture, but persists and continues to grow and produce increasing amounts of folliculin, until a certain level is reached, when anterior hypophyseal function is inhibited. This brings about a drop in folliculin production, with clinically a phase of bleeding, which may be profuse and prolonged. In other words, as long as the endometrium is receiving a steady supply of folliculin bleeding is absent, but when this supply is cut off abruptly, bleeding occurs. The primary seat of the disturbance is unquestionably in the anterior hypophysis, but the hormones immediately concerned are those of the ovary.

This statement is borne out by the findings in the ovary and in the endometrium. In the former, corpora lutea are characteristically absent, for ovulation does not occur, explaining why such women are sterile. The endometrium in such cases characteristically shows a greater or less degree of the microscopic picture designated as hyperplasia, due to an excessive and prolonged folliculin effect, in the absence of progestin. Secretory activity in the gland epithelium, because of this progestin lack, is never seen. If it were, the designation of hyperplasia would be incorrect.

A rational treatment for these cases, and one which would almost surely be successful, would be the administration of progestin. There are now several commercially available preparations of this substance. Formerly we employed what seemed like the most rational substitute for it, i.e., the luteinizing principles obtainable from the urine of pregnant women (Novak and Long). This remains a very satisfactory endocrine treatment for functional bleeding, though now we more often use progestin or a combination of progestin and one of the prolan preparations, such as antmion. For a discussion of the rationale and the method of treatment, the reader may be referred to our original paper.

In minor degrees of this functional bleeding the menstrual excess may be only slight, and furthermore, the same essential functional abnormality, with absence of ovulation, may at times be seen in women who are menstruating fairly regularly, and in normal amount. This group of cases of "anovulatory menstruation," while relatively a small one, is of great importance, because it explains certain cases of sterility, as I have discussed more fully in two recent papers, so that I shall not elaborate upon the subject here. Is there any way in which we can determine this absence of ovulation? There is such a way, through histological examination of the uterine mucosa just before an expected menstruation. To obtain this tissue anaesthesia is not always necessary, for in many women a very small curette can be introduced into the uterus without preliminary dilatation of the cervix. Or, if one prefers, the method of suction suggested by Klingler and Burch may be employed, or, even better, the more powerful aspiration through a cannula attached to an electric pump, as recently suggested by Lorincz, of Budapest. I have recently been employing the latter technique with much satisfaction, as I hope to detail in a later paper.

This ovulation test I now look upon as an indispensable part of the routine examination of cases of sterility in which other more obvious factors can not be found. The presence or absence of secretory changes in the gland epithelium is the determining factor. The diagnosis can usually be made by a glance at the stained secretion, but in some cases it may be necessary to stain for glycogen, always absent if ovulation has not occurred, and present if it has taken place.

So far I have spoken chiefly of excessive menstruation. What about the other quantitative disorder, amenorrhea? Here the problem is even more difficult, because of the fact that the possible factors in the etiology of amenorrhea cover a wider, more constitutional range than do those of functional menstrual excess. Confining ourselves only to the endocrinopathic type of amenorrhea, the three ductless glands with which we must most frequently reckon are the ovaries, the pituitary, and the thyroid, although other endocrine structures, such as the adrenal, may at times be concerned.

Of these endocrinopathic types, the ones most favorable from the standpoint of treatment is that due to thyroid deficiency, easily demonstrable by basal metabolism determination. I am always glad to receive a report of a minus 40 or minus 50 rate in such cases, for the simple administration of thyroid extract is very likely to re-establish menstrual rhythm in such cases. Most of this group present other stigmata of thyroid deficiency, especially obesity of fairly general distribution, with often a myxedematous character.

Unfortunately, however, thyroid excess may likewise bring about amenorrhea, and I have seen this symptom in quite a number of cases of toxic goitre. Indeed, we know very little as to the nature of the relation which undoubtedly exists between the thyroid and the gonads where there is no thyroid deficiency or an actual hyperthyroidism. We are obliged in such cases to have recourse to some form of ovarian therapy, as in the hypogonadal cases.

The latter group is a very poorly defined one and the term is undoubtedly often used to cloak our ignorance of the etiology in many instances. The tendency has been, as a matter of fact, to put in this group pretty much all cases except those in which a thyroid or pituitary causation can not be demonstrated or even logically assumed. The normal prototype of hypogonadal amenorrhea is that which occurs at the menopause, when gonadal hypofunction occurs normally. With the amenorrhea there is usually a more or less marked increase in weight, with especially heavy deposits about the abdomen, buttocks and hips. If, with this, there are vasomotor symptoms like those of the normal menopause, there would be little question as to the hypogonadal nature of the amenorrhea.

However, there are not a few cases of amenorrhea not associated with obesity or vasomotor symptoms, with none of the earmarks of hypopituitarism, and with perfectly normal basal metabolism. While these cases are often spoken of also as primarily hypogonadal, there is much question as to their real nature. It seems more likely that the underlying disorder involves the pituitary sex hormone, without any involvement of the metabolic mechanism, which many now believe is directed from the hypothalamic regions of the brain. While even with a normal metabolic rate small doses of thyroid may be given, we are usually obliged to resort, always without enthusiasm, to the use of ovarian therapy in one form or another. The female sex hormone (theelin or amniotin) is the best form and these substances should, I believe, be combined with one of the prolan-containing preparations (Antuitrin S or Follutein), because the latter are not only the nearest approach to a substitute for the luteinizing ovarian hormone (progestin) but they also, at least in many experimental animals, appear to have a motivating and stimulating effect upon the ovarian secretory function in general. Lately several preparations have become available of what are purportedly the sex hormones principles of the gland itself, but they are too new as yet to permit of worthwhile clinical evaluation. I am stating these concepts very briefly and arbitrarily in this paper, because I have discussed them much more fully elsewhere.

The hypopituitary type of amenorrhea is often quite clearly distinguishable clinically, appearing most characteristically as a part of the well-known Frohlich syndrome (adiposogenital dystrophy). Patients of this group are commonly of rather short stature, with often delicate features, rather small hands and tapering fingers, and with a characteristic type of obesity. There are usually rather heavy shoulder-pads of fat, a large bust, a small waist, and a heavy girdle of fat about the abdomen, buttocks and hips. There may be a tendency to hirsutism, but this is by no means the rule. In only a small group, in my experience, is there much complaint of the so-called "pituitary headache" or vertigo, and when these symptoms are pronounced, and especially when there are associated visual disturbances, one must be on the watch for neoplastic rather than functional hypophyseal disease. Most often the basal metabolic rate is normal or only slightly diminished.

There can be little doubt that the amenorrhea in these cases is due to a diminution in the production of the pituitary sex hormones which normally are essential for ovarian activity. The metabolic changes, on the other hand, are now believed to be due to associated disturbances in the hypothalamic regions of the brain immediately contiguous to the anterior lobe. In spite of this, this clinical type of amenorrhea is still quite generally spoken of as hypopituitary.

Its treatment consists of various combinations of thyroid, pituitary and ovarian substances. The oral administration of pituitary substances probably has no effect in the doses usually advised, though enormous dosage is believed by some to be of value. The prolan-containing "pituitary" preparations now so popular for hypodermic use are dependent for any activity on a substance which is probably not of pituitary origin, for the evidence is accumulating that prolan is a product of trophoblastic rather than pituitary activity. However, they do have, as already stated, a stimulating effect upon the function of the gonads, in some of the lower animals at least, though their effect upon the human ovary is still a matter of question. Their use is not perhaps altogether irrational, though good clinical results are obtained in only a comparatively small proportion of cases, more especially when they are combined with the female sex hormone, as in the hypogonadal cases already mentioned. Finally, practically all clinicians, in the treatment of these cases, resort also to the inevitable pinch of thyroid, which many believe is far more valuable than any form of ovarian therapy as yet available. Light radiations of the pituitary or the ovary are used by some clinicians, but they are still to be looked upon as "shots in the dark," and the clinical results are anything but impressive.

All in all, therefore, the results of organotherapy in amenorrhea are as yet very disappointing, though there can be little doubt, from the rapid strides being made in reproductive physiology, that before many years our endocrine treatment of amenorrhea, as well as other menstrual disorders, will be far more scientifically precise and satisfactory than it is at present. In the meantime, it should be remembered that amenorrhea is in itself a harmless symptom, so that, if it were not for the commonly associated sterility, it would usually in itself need no treatment except a reassuring and instructional talk from the medical adviser.

If time permitted I would like to discuss the endocrine aspects of primary dysmenorrhea, that bane of gynecological practice. The disorder has a most protean etiology, in which constitutional, psychic, and endocrine factors are all involved, and often in an intertwining way. No problem requires a greater breadth of both wisdom and knowledge on the part of the physician. Some cases can be cured by simple constitutional measures, and some patients, I am sure, can be talked out of their dysmenorrhea by a wise medical consultant. In others there appears to be a real endocrine imbalance between the folliculin and progestin produced by the ovary, as Reynolds and I have urged in a recent paper. As a valuable but not by any means infallible therapeutic adjuvant in the management of these cases, I would suggest the use of one of the prolan-containing preparations from the urine of pregnant women, for these have been shown by Reynolds to exert a strong inhibitory effect upon the contractility of the uterine musculature. The reader who may be interested in a fuller discussion of the subject of primary dysmenorrhea may be referred to a previous paper by the present author.

Finally, I would have liked, had time permitted, to consider also the treatment of the vasomotor symptoms so characteristically noted in women at the menopause, but only a brief reference to this subject will be possible here. In the great majority of menopausal women, no endocrine treatment is necessary. Often the symptoms are very mild, or, when somewhat more troublesome, the patients can be made quite comfortable by such simple measures as reassurance, the avoidance of worry and stress, and the administration of such simple nerve sedatives as the bromides.

In a minority of women, however, the vasomotor flushes and sweats are extremely severe, recurring very frequently both by day and by night, so that the problem of relief becomes a very real one. In addition to all the simpler methods above mentioned, I have felt that the administration of the follicle hormone, in the form of either theelin or amniotin, is of great value in reducing the severity of the symptoms in these patients. I prefer the hypodermic route, the usual plan being to give 50 units every day or every other day for from two or three to six or eight injections, depending on the severity of the symptoms and the rapidity of the therapeutic response. A similar course is repeated from time to time as the symptoms reappear, while during the remissions nerve sedatives will usually suffice to keep the patient comfortable. There is a definite rationale in such treatment, and I do not believe that the results obtained are to be explained on a purely psychic basis.

There are still other functional disorders in which efforts at organotherapy may be made, but the results are usually disappointing, so that they need not be discussed in this paper, the avowed purpose of which, as I set forth at the outset, is to discuss broad principles of endocrinology rather than to outline plans of organotherapy. That a rich therapeutic reward will follow from the intensive studies being carried out in the field of reproductive physiology seems certain. In the meantime, no intelligent gynecologist can afford not to be familiar with the endocrine aspects of his specialty. Intricate and confused as the subject still is, enough is known to give one a new and fresher viewpoint concerning many old problems, and to add a new zest to the daily work of the gynecologist so fortunate as to be possessed of an interest in physiology and endocrinology.

Yellow Fever In Mississippi 1878-1905

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CHAPTER VII

WATER VALLEY, OXFORD, A. & M. COLLEGE, STARKVILLE

Water Valley on the Illinois Central Railroad, 29 miles north of Grenada, Miss., was my home from 1870 to 1900. It was there I commenced the practice of medicine in 1876, and there I had yellow fever in 1878, just 20 years previous to the present outbreak in North Mississippi. In 1878, the town, like most others in Mississippi, was in very unsatisfactory sanitary condition, with no piped water and no under ground sewerage. At the date of the epidemic of which I am writing the town had grown from about 3500 to 5000 population, and improved in every respect, having plentiful supply of excellent water from artesian wells and a splendid underground sewerage system. The town owned its own light and water works, and found it very economical to operate the same.

The mildness of the fever in 1898, compared with 1878, is remarkable. In the former year there were reported 300 cases of fever and 75 deaths. And in the latter year, thirteen cases and no deaths. My report to the State Board of Health of November 30th, 1898, gives a correct record of the management of the situation, and does great credit to Dr. L. T. Fox, who represented the State Board of Health, and who, although non-immune, remained in town, and fortunately never became a victim of the disease.

REPORT

"Water Valley

Although within nine miles of Orrwood, and ten miles of Taylor where there were in all 233 cases of yellow fever, and in frequent communication with both places, Water Valley escaped general infection. This result was due in a measure to her excellent sanitary condition, it being one of the cleanest and best-drained town in the State. Our good fortune in escaping an epidemic cannot be ascribed wholly to this cause, however, but it is due in measure also to the excellent management of the situation by Dr. L. T. Fox, who was placed in charge September 1st, for the State Board of Health. Dr. Whitson who had visited Dr. Gray at Taylor and the Gray family at Orrwood, was taken sick August 26th. Dr. Fox had the house quarantined as soon as the fever at Orrwood was announced, and on September 3rd sent the children and other members of the household to the country. He had rubber sheets placed on the beds on which the doctor was sick, and had all the bedding, bedclothing and clothing worn by the patient changed once a day, and soaked over-night in 1 to 1,000 bichloride of mercury solution. He also had the discharges from the patient passed into vessels containing the above solution and at once emptied into the sewer. Mrs. Whitson was taken sick September 4th, but did not present the symptoms of yellow fever and as she subsequently had yellow fever, it is positively known that she did not have it during her first illness. Drs. Haralson, Carter and I saw both cases with Dr. Fox September 7th, and agreed that clinical evidence was wanting in both cases, but on account of the doctor's previous exposure, it was thought best to continue the house in quarantine and to disinfect it after recovery of the sick. On September 17th, Dr. Fox had all inmates of the house removed, after having taken an antiseptic bath and put on clothing that had not been in the house. On September 19th, the house was fumigated by Dr. Cobb of the Marine Hospital Service and kept closed for two days. Allie, Katie, and Ruby Whitson cleaned up the house September 24th, and the family moved in September 26th. Allie was taken sick September 27th, three days after cleaning up the house; Katie was taken sick September 28th, four days after cleaning up the house. Grace, age five, slept in Whitson house night of September 26th, was taken sick October 1st, at 3 a. m.

Carrie, age twelve, continuously in the house since September 26th, was taken sick October 7th. Mrs. Whitson, continuously exposed since September 26th and during the doctor's illness, was taken sick October 13th. Ruby, continuously exposed since September 26th, was taken October 13th. John, age three years, was taken October 13th, after being continuously exposed since September 26th. Annie Laurie, age seven, slept in the Whitson house night of September 26th and kept away thereafter, was taken October 14th.

Malcolm Swoffer, age sixteen, with no definite history of exposure, was taken sick September 23rd; this case was seen by Drs. Murray, Cobb, Waldauer, and myself in connection with Dr. Fox. The same antiseptic precautions were carried out in this case in the Whitson house, no other cases developing in the house, there being two inmates of the house continuously exposed.

Dan McAughan, age twenty-three, was taken sick September 29th with no history of exposure; the same antiseptic precautions were taken in this case and no other cases developed from it. This case was being treated by Dr. J. H. Shoffner, and was reported suspicious on October 1st.

Three other cases were reported from Water Valley but developed the disease at Dickson relay station, four miles south of town, late in the season and were sent to Camp Haralson, north of Oxford. Twenty-four other persons living contiguous to houses where yellow fever existed, were sent to detention camp, none of whom developed the disease; sixteen persons were exposed, some of them continuously, who did not have the fever. All persons sent to the detention camp were kept there twenty-one days. Dr. Fox visited the camp from three to five times per week and reported no sickness at any time.

Dr. Fox inspected daily for several days three families, whom Mrs. Williams, of Taylor, whose son had previously died of yellow fever, visited; in none of them did any sickness appear. In the latter part of September and early in October he was requested to see three cases of sickness and one corpse, about which there was suspicion. In none of those cases was he able to find evidence of yellow fever and no other cases of sickness developed in the houses in which these cases occured, nor in the persons who had visited the sick. The first case of yellow fever in Water Valley was that of Dr. Whitson, August 28th, and the last case, October 14th. There were no deaths. There were four foci of infection. Dr. Moody, of Port Gibson, was sent to Water Valley by the Board on October 5th, and remained about a week assisting Dr. Fox.

The town was quarantined and some of my best friends were very indignant that restrictions should be placed in trade and traffic, when there seemed to be so little danger of persons contracting the fever by coming into town. People are usually very anxious to be quarantined against other towns, where there is fever, but when they are quarantined in their own town, with all communication shut off, they usually become very restless and hard to manage. However, Dr. Carter was in charge of all quarantine matters, and made a number af visits to this section of the state. By his able and tactful handling of the situation he was successful in managing the people, for in aplying the quarantine rules and regulations which had been adopted by a conference of the Health Authorities of the Gulf Coast States at Atlanta, Ga. on April 12th, he interfered as little as possible with traffic, consistent with the health and safety of the people. He was never arbitrary or dictatorial, and had the faculty of accomplishing his ends with the least amount of irritation, or friction. He was a great executive officer, as well as an able and conscientious scientific investigator.

The history of the taking down of the Whitson children in such quick succession, after the fumigation of the house on the 19th of September, and the cleaning up of the same on the 24th, and the return of the family on the 26th of September is of special interest, showing the rapidity with which the children became infected. Dr. Carter and I had noticed that in several instances where houses had been fumigated, and the family moved back, cases of yellow fever developed with unusual rapidity. This occurred in house number 19 of the "house records" in Orrwood, where the J. W. Gray family sickened in quick succession, after fumigation of the house. Although the date from September the 18th, time of fumigation, to the taking down of J. W. Gray Oct. 8th was twenty days, which was not considered an unusually long period of house infection. And on the mosquito theory, it can be supposed that the mosquitoes already infected were not very active, and that the family were not bitten by them immediately on their return into the house. In the case of the Whitson children the mosquitoes seem to have been very hungry, and began biting almost immediately after the return of the children to the home. They are very fond of biting children, which accounts for the short period elapsing between their return, and the time of becoming sick. At any rate the study of the incubation period of yellow fever, as shown at two houses mentioned, is of great interest. A particular point to be noted is that fumigation of houses was not always successful in preventing the developing of yellow fever, did not always destroy the house infection, or kill the mosquitoes in the house.

OXFORD

On September 16th, I was called by telegram from Dr. Baird, Health Officer of Lafayette County, to Oxford, to see Mr. B. S. Jumper and his daughter. I was unable to decide positively as to the nature of their sickness, although mush impressed by the symptoms that Mr. Jumper had yellow fever. I hesitated for several reasons to declare the same until I could be absolutely certain of my diagnosis.

Oxford is a town of about 3000 inhabitants, 2200 of whom are white, and 800 negroes. The town is on the Illinois Central Railroad, 18 or 20 miles north of Water Valley, and eight or ten miles north of Taylor. The University of Mississippi is located at this place and it is the town where my boyhood and youthful days were spent. Here I received instruction at the University. in 1968, '69 and '70. The place is associated in my memory with many pleasant incidents of early life. Here still live a number of my loyal friends and acquaintances. It is a town with many intelligent and refined people. In addition to the University, there was a large female college and other splendid schools. The topography of the town is such as to indicate healthfulness, though it was perhaps not in the best sanitary condition at the time of which we are speaking. They had no underground sewerage, only surface drainage. The water supply was good and plentiful from wells. The town had the reputation of being free from malaria to a very great extent. In 1878 Oxford, although about half way between Grenada and Holly Springs in both of which towns the scourge was so fatal, escaped entirely, and had not a single case of yellow fever that year.

I felt a great interest in Mr. Jumper, whom I had been called to see, because of an incident in which he was associated with my oldest brother during the Civil War. On the first day of the Battle of Shiloh, Captain John Evans, of the Company to which my brother and Mr. Jumper belonged, was instantly killed at my brother's side.

They had been friends, and intimately asassociated. The night the battle began, he told my brother that he had a premonition that he would be killed in the battle, and delivered to him certain messages and keepsakes, to be sent to his mother and sweetheart at Oxford in case of his death. At night when the firing ceased, my brother and Mr. Jumper secured a wagon, went back over the battlefield, found the body of Captain Evans, and my brother was detailed to take the same to his home at Oxford. So I felt quite an interest in Mr. Jumper and his family.

I returned to Oxford on the 18th and after a more thorough examination was satisfied that the sickness was yellow fever, and so announced it. I placed Dr. Waldauer, of the M. H. S. who arrived in Oxford on that day, in charge. The next day Dr. Haralson, of the Mississippi State Board of Health, was placed in charge, and did most excellent work in managing the epidemic.

One of the pioneer citizens of Oxford who had lived there for more than half a century, was Dr. Thomas D. Isom, the outstanding medical man of North Mississippi, a cultured, intellectual, and able physician. He was a man of great influence, the consultant of all that section of the State. I do not think Dr. Isom had ever seen any yellow fever, since they had none during the epidemic of 1876 in Oxford. It so happened that he did not think that my diagnosis of yellow fever was correct, and I was told that he very vigorously protested against the idea of there being yellow fever in Oxford. He had under treatment a couple of cases of yellow fever at this time. He was calling the disease "highland malaria." When Dr. Haralson took charge of the situation, he decided the best thing to be done was to depopulate the town, and in connection with the M. H. S., a camp was established to which were transferred about 450 negroes, and another with 40 or 50 whites. Dr. Haralson called on Dr. Isom and had great difficulty in convincing him that the disease was yellow fever. He told Haralson that if the patient, who was so very sick at that time, and who had, according to Haralson, yellow fever, died he would then go to the country. She died and he went to the country, escaped the fever, and lived a number of years longer, one of the most honored and respected physicians, as well as one of the most beloved citizens of North Mississippi.

After depopulation there were left some two hundred, 125 colored and 77 white in the town; there were sixty cases of fever, and 11 deaths among the whites, and 25 cases and one death among the negroes, in the town. There were eight cases and no deaths in the negro camp, and three cases and no deaths in the white camp. The management of this situation reflects great credit upon Dr. Haralson and the M. H. S. and convinced him that depopulation of a town with yellow fever, as Oxford was at that time, is a most successful sanitary measure.

On September 22rd on request of Dr. Jackson, local physician, I went to Pine Valley, fifteen miles east of Water Valley, and examined a number of cases of sickness, which presented some suspicious symptoms but in my opinion were not yellow fever.

On September 28th I was again called o Water Valley by Dr. Fox to examine a case which he had pronounced yellow fever. Dr. Waldauer accompanied me and agreed with me that the boy, young Swoffer, had yellow fever.

About the middle of September, I was requested to go to Winona, and upon my arrival there, found the lady about whom Dr. B. F. Ward had suspicion of yellow fever dead. Six or eight hours after death I performed an autopsy, and reported to the State Board of Health that the findings were not conclusive of yellow fever. However, Dr. Ward in his report as County Health Officer of Montgomery County, was very positive that this patient died of yellow fever, and in his opinion, a possible outbreak of the fever was prevented by the early diagnosis and the sanitary precautions taken. He may have been correct in his opinion; it is rarely safe to make a diagnosis by an autopsy alone.

STARKVILLE AND A. & M. COLLEGE

As General State Inspector, I was called to many different towns to make the diagnosis in cases of suspicious fever, and the one thing that I am proud of in my professional life is that I do not recall being mistaken in my diagnosis at any place or time during that year. Early in October, while at my home in Water Valley, I had instructions to go at once to Starkville, where Dr. Barr reported four cases of sickness in the Agricultural and Mechanical College. I shall never forget the rapid time that was made by the engineer of the train furnished me on that trip. He was a regular kind of a Casey Jones engineer, for he ran so fast that it seemed to me the single coach in which the conductor and I sat would jump the track any minute. However, we reached Starkville safely, and as I stepped out of the coach, I noticed the people all gave way and allowed me a broad road to a horse and buggy, the horse being held by a negro man. Some one called to me. "There's your buggy, Doctor," and when I reached the negro, he said, "You just follow that buggy ahead of you. That man will take you to the A. & M. College." I found the suspicious cases in the hospital were yellow fever, and gave Dr. Barr instructions as to the management of the situation. He asked me to make the announcement to Gen. Stephen D. Lee, the President of the College. General Lee was one of the noblest and bravest of men, but when he met me on the campus, and I made the announcement of fever, he turned pale and looked almost as if he would faint, such was his anxiety and distress. At that time his wife's health was very poor, and he feared that the announcement of fever in the school would not only break up the college, but would be dangerous to his wife. However, it was late in the season, and there were only five other developments from the patients, and the college exercises were not seriously disturbed.

On October 1st, I went to Winona to see a Mr. Neal, who had a sudden attack of sickness with what was supposed to be black vomit on the first day of illness, and about whom the physician was very much alarmed. This was my second visit, the first having been the day of his attack. After careful examination it was decided that his case was not yellow fever. The vomiting of blood was probably from ulcer of the stomach. In the latter part of September, I was asked to go to Waterford, north of Oxford, with Dr. Haralson, where he examined a case out in the country, which we decided was not yellow fever. Later in the season I went with him to Abbeville, where we examined several cases which in our judgment were not yellow fever. Later we were called to Grenada to see a case which we decided was not yellow fever.

Yellow fever occurred at about thirty different towns in Mississippi during the year, as follows: McHenry, Eucutta, Taylors, Orrwood, Waterford, Jackson, Oxford, Edwards, Water Valley, Harriston, Fayette, Madison, Port-Gibson, near Woodville, Centreville, Clinton, Starkville, Hermanville, Natchez, Ridgeland, Lumberton, Hattiesburg, Poplarville, Canton, Waveland, Crystal Springs, Tougalou, Yazoo City, Meridian and McRaven. There were in all reported to the State Board of Health 1386 cases, of whom 1017 cases were white, and 367 colored. A total of 84 deaths was reported, making a death rate of about 7 per cent. All places were taken in charge by representatives of the Mississippi State Board of Health assisted by representatives of the M. H. S. The death rate was greater at some places than others. At Taylor nearly 11 per cent at Oxford about 15 per cent, Edwards 9 per cent, Hattiesburg 9 per cent. Over the entire infected areas of the State the epidemic was of a remarkable mild type compared with that of 1878 The fatality probably has been greatly reduced treatment and management, and by the very decided improvement in the sanitary condition of the State. The disease was so mild in many instances that doctors and the people were loath to accept the diagnosis of yellow fever. In fact, unless a patient was very greatly jaundiced, had black vomit, suppression of urine or died, many people thought that the disease could not be yellow fever.

In my judgement the insanitary condition of the localities has been a cause of increased fatality. But why this is true I have been unable to determine. According to the mosquito theory it is possible that the stegomyia fasciata, being a house mosquito, found more food in such places adapted to its need, and the formation of more virulent virus than in clean, sanitary communities with few houses,and they distant from each other, as at Orrwood and others.

The epidemic of 1898 in Mississippi reflects great credit upon the management of the disease by the Mississippi State Board of Health, and M. H. S. It reflects great credit, especially upon Surgeon H. B. Carter, who this year at Orrwood worked out and established the epochal theory of the "Extrinsic incubation period of yellow fever."

In my own life and professional experience, it was most interesting and satisfactory.

1888

Following the trying years af 1878 and '79

Mississippi was free of yellow fever until 1888 and then only fourteen cases, with seven deaths occurred in Jackson. The infection was said to have been brought from Jacksonville, Florida. The cases were near the railroad station and fortunately a diagnosis was made early and a developement from these prevented, but the state was thrown into the wildest excitement and some of the railroads immediately quarantined. A very suspicious case was announced at Coffeeville, thirteen miles south of Water Valley, and, as I was the health officer of the county, I was called upon by the doctors to come down and decide the question. Capt. W. A. Herring, who was Mayor of Water Valley at that time, a very nervous man, and terribly afraid of yellow fever, said that if I went to Coffeeville he would not permit my return to Water Valley. I told him that since I was health officer of the county it was my duty to go, and that I would go, whereupon he said he would put out guards and not permit my return. I carried along an extra suit of clothes, and changed my coat and trousers before entering Coffeeville. I found the patient had died, but examination of the body and the history given by the attending physicians, made up my mind that it was not yellow fever. I wired Capt. Herring to that effect and returned home, passing guards on the road just before entering town. They did not undertake to stop me. Capt. Herring was not at all pleased with my action and made much light of the telegram that I had sent him, which I found tacked on the drug store door with the following comment, written by him: "Which boiled down, I suppose means, no yellow fever." I was very happy that no other cases developed from the patient at Coffeeville, and readily forgave the Captain for treating me with slight discourtesy. I could tell some interesting anecdotes about the good old Captain, but my paper is long enough, except that I must tell that I was married February 8th, 1888, to Miss Mary Lou Rainey, daughter of W. S. Rainey and wife, Mary Minter Rainey, of Columbia, Tennessee, who still abides with me. She is an ideal doctor's wife. We have two fine sons, Albert Minter Gant, Knoxville, Tennessee, and Richard Preston Gant, Columbia, Tennessee. This brings me without any important episodes, except those common to an active small town and country practitioner of medicine, to the year 1897, the beginning of my really active service, in efforts to control the spread of yellow fever in Mississippi. But that is for another chapter.

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We wish for every one of our readers a happy and a prosperous new year. This journal is very thankful for the many friends who have been loyal through the years. We want to serve you better in the future than we have in the past. The journal is not what we want to make it by any means. By your help and your loyalty we can make it much better in many ways. The journal is ambitious to render service. We appreciate the words of encouragement from friends, the suggestions to make the journal better, the aid some have been in helping us secure advertising and in every way to make the journal a success. To establish a state journal against all the odds has not been an easy job. It has meant much work and money in addition. Your kind words, good will and productive thoughts mean much. The journal wants you to feel that it is yours. It is native born, but it has a vision to serve beyond the confines of its state. The leadership and the constructive thought of a journal counts more than any one other thing. From the doctors of Mississippi, the Mid-South and even beyond these confines, *The Mississippi Doctor* tried to gather the progressive ideas and pass them on. In its scientific papers it is different to other state journals in a large measure. We have papers from the general practitioner in the country up to as creditable papers as are published in the United States. Each month we have special papers written for readers. Last summer the journal sought to give its readers the latest information on infantile paralysis while the epidemic was on and while the rank and file were intensely interested in this subject. We are just saying this to say that this journal is trying to serve the profession as it should be served. With good will and good wishes let us go forward with the new year.

:o:

The fourth quarterly meeting of the North East Miss. 13 County Medical Society held at Tupelo on December the 15th was well attended. The scientific program was unusually good. The entertainment was up to standard or above for Tupelo, and this means much. For a cordial hand, lavish, unique and refreshing entertainment, Tupelo is not to be surpassed. The players from the WREC station were full of good music and refreshing wit. Dr. A. J. Stacy puts forth his best foot as toastmaster. The society was especially honored and highly pleased to have Dr. Henry Boswell at the scientific session and to be addressed by him at the banquet.

The Society is under lasting obligations to the T. K. E. Drug Company for the bounteous banquet and for the lavish gifts to both doctors and wives. We express our appreciation to the Hotel Tupelo for special courtesies.

We were also delighted to have the president of the State Auxiliary, Mrs. A. G. Wilde and to have such a nice greeting from her.

:o:

It is now Mayor Dr. T. M. Dye, of Clarksdale. Doctor Dye is the full-fledged mayor of the thriving city of Clarksdale, a city that has the biggest ways perhaps of any city to its size in the United States. Doctor Dye will do the job well in our opinion. He is versatile, efficient, and diplomatic. Congratulations to our splendid and very popular secretary of our state medical association.

The annual meeting at Vicksburg was a splendid success as usual. At this meeting Dr. P. W. Rowland, of Oxford, was present and was called upon for some remarks. He narrated an incident that was most interesting and very impressive. In the line of duty he was exposed to yellow fever. The law insisted on his leaving home. A friend out of town urged him to come into his home and he consented. Dr. Rowland did not have yellow fever, but he had impressed upon him the value, the beauty, and the sacredness of untarnished friendship. Dr. Rowland is a scholarly teacher, he is courteous and courtly, he has a store house of liberal information, and his wisdom is doubly distilled. "Add personal interest and friendship to your medical knowledge and technical skill," is the admonition, as we understood it, of our most scholarly dean of teachers, a successful practioner, a versatile and valuable citizen. If every doctor in the state could have heard this talk of Doctor Rowland's, we believe the heart power of the profession would have been greatly augmented to its own good and to that of its clientele.

:o:

Prentiss County reported a hundred per cent dues paid for 1937 at the Tupelo meeting. Dr. R. B. Cunningham is secretary of the county society, R. H. Christian of Baldwyn, president, and Dr. R. B. Caldwell, councilor of the first district.

:o:

The reading club organized by the doctors of Corinth is an unique idea. Each member is to read and to abstract a different journal each month. These abstracts will be published in *The Mississippi Doctor*.

:o:

The time is at hand for the practice of preventive medicine by the rank and file of the profession. The general public must be convinced of its importance and educated to pay for it.

:o:

You will note in this issue of the journal the complete program of the Mid-South Post Graduate Medical Assembly. Make your plans to attend four days if possible.

:o:

We deeply appreciate the tribute paid to *The Mississippi Doctor* by Dr. W. L. Little, president-elect, at the Vicksburg meeting in December.

:o:

A well trained nurse for every practitioner can be made profitable to every one concerned. If we are to keep out of state medicine the medical profession must serve its service in such palatable form that the public will not have a desire for a change.

:o:

Now at the beginning of the new year let every practitioner do or have done a Wassermann on every expectant mother in his charge.

:o:

The annual meeting at Vicksburg was quite a big success. Vicksburg steadily grows as a medical center.

:o:

Fractures and traumatic surgery are making the small hospital in the small town of more importance each day.

:o:

Plastic surgery is the specific for some cases of inferiority complex.

:o:

There should be no conflict between public health and general practice.

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Another year has slipped away. It is fitting that we should take stock of what has been done. We are persuaded that 1936 has been a fruitful year in all worthwhile matters in our state and nation. We feel that organized medicine has kept pace with other interests and activities. The meeting at Greenville was an unusually good one. The papers read and the discussions of these papers were fully up to the national standard. The annual oration was delivered by Dr. Fishbein, editor of the American Medical Association Journal was splendid. This versatile man told me while there, that our meeting was fully up to grade in all respects. We have been privileged to attend a number of district meetings in the state since the state meeting in May. They were, all of them, unusually good. But of them all, I think the Tupelo meeting of the Thirteen-County Society was the best. This meeting was held on the fifteenth of December and was the last quarterly meeting of this great society for the year 1936. Each paper read on this program might well be rated as a classic. The first was a summation of "Syphilis in Northeast Mississippi." But it was of such broad scope that it might have been applied to the nation and the world as for that. This paper was read by one of our younger members—Dr. Warriner of Corinth. But it followed, closely, the lines laid down by Surgeon General Parran in his recent approach to this subject. This subject has never been viewed and treated in its proper relations. We feel that Dr. Parran has, probably, hit upon the proper plan to control this social and medical problem. This disease is entitled to be listed as "the chief among the captains of death" and must be given a prominent place in public health programs if our profession is to live up to its obligation to the public. The lecture delivered by Dr. O. S. Warr, of Memphis, on the treatment of pneumonia was wonderfully full and lucid. I have never heard a discussion of this most important subject that was better—and few, if any, that were as good. What a pity it is that every doctor could not have heard it. It was scientific, yet so simple. I hope every reader of *The Mississippi Doctor* will read this paper when it is published, as I am sure it will be quite soon. In our thinking the strongest point in this lecture was the fact that medicine per se does *not* cure pneumonia, that the *leucocytes* must be depended upon to destroy the organisms that cause the disease—hence, it follows that any treatment that may be expected to be of service *must,* of necessity, increase leucocytosis. It also follows that *anything* that does this is a proper therapeutic measure. Quinine, arsenic and mercury have been regarded as the most dependable drugs when this is desired. It is the opinion of this writer that *all* vaccines are beneficial just so far as they cause an increased leucocytosis. (Let us get back to Metchnikoff and his teaching.) I was delighted to hear him say that the old time cough remedies must be left out of our thinking—that *no* drug or drugs could thin the expectorations. That opium in some form is the only drug of service in controlling cough and that only when cough is so harrassing as to prevent sleep is *it* to be used, since the cough is a salutory incident. Again he urged that digitalis be eliminated from the small number of drugs to be used unless and only when auricular fibrilation was distressing. He even intimated that it was af questionable value under that condition. (I wonder of the use of quinine might not obviate the advent of fibrilation?) Please do not fail to read this able presentation of this important subject when it shall appear in print.

Our own Dr. Caldwell read a splendid paper on a subject the importance of which has not yet been realized—namely amoebic dysentery. In this paper the treatment of the condition was stressed and some very satisfactory reports were given. In our thinking it might have been better had he emphasized the prevalence of this trouble more. I am sure that we have a great deal more of it than we think and that it has long been neglected and that most of our cases go unrecognized . Let us all be more awake to the importance of early recognition of this trouble; because its control and eradication depend entirely on correct diagnosis.

Another splendid paper was read by Dr. M. Q. Ewing. The title of this paper was "Safe Gynecological Surgery." I am afraid our surgeons (some of them at least), do not consider the element of *safety* as much as they should. Dr. Ewing is to be commended and congratulated for his clear understanding and presentation of the many dangers that attend surgery for the relief of gynecological conditions. Had he emphasized the fact that too much *unnecessary* surgery is being done for gynecological conditions, as well as the fact that surgery is done when it is dangerous, I think his paper would have been well-nigh complete.

On the whole, it was a great program. Such meetings (and they are numerous) emphasize the fact that no conscientious physician can afford to absent himself from them. He owes it to himself and his clientele that he go and keep himself abreast of the times. Again the public has come to understand this and they expect (and soon will demand) that their doctors wake up and give them the type of service to which they are entitled.

Let us renew our determination to go forward during 1937. We must go forward or else we certainly will slip backward. There is no such thing as standing still in medicine. When a man finds that he is willing to rest on his oars, he should stand aside and not hinder the parade. Let him get out of the work for which he is no longer fitted.

G. S. B.

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LICENSES GRANTED

License to practice medicine in the State of Mississippi was granted by the Mississippi State Board of Health on November 28, 1936, to the folowing.

Dr. Charles T. Berry, Greenville; Dr. Nollie C. Felts, Hattiesburg; Dr. Esther Handcock, Blue Mountain; Dr. John S. Harter, Sanatorium; Dr. John D. MacKellar, Woodville; Dr. George W. Mast, Lexington; Dr. Nelson O. Tyrone, Prentiss.

NORTH MISSISSIPPI MEDICAL SOCIETY OFFICERS FOR 1937

President, J. H. Wood; Vice-President, A. P. Alexander; Secretary, A. H. Little.

Delegates and alternate-delegates to the State Association: Benton County, Frank Ferrell, W. F. Coleman, alternate; Lafayette, E. S. Bramlett, F. E. Linder, alternate; Marshall, R. G. Grant, Ira B. Seale, alternate; Panola, J. H. Wood, pres., A. P. Alexander, vice-president; Tippah, C. M. Murry, R. M. Adams, alternate; Union, S. E. Eason, C. M. Speck, alternate; Yalobusha, R. J. Criss Sr., D. C. French, alternate.

OFFICERS OF NORTHEAST THIRTEEN COUNTY MEDICAL SOCIETY

Dr. L. L. McDougal, Booneville, president. Dr. A. J. Stacy, Tupelo, secretary. Dr. N. W. Nanney, vice-president, Dr. J. S. Senter, deledate, Itawamba County; Dr. A. K. Naugle, vice-president, Dr. J. E. Enis, delegate, Clay; Dr. A. E. Brown, vice-president, Dr. W. L. Stalworth, delegate, Lowndes; Dr. J. L. Melvin, vice-president, Dr. L. B. Morris, delegate, Noxubee; Dr. J. A. Rayburn, vice-president, Dr. E. B. Burns, delegate, Pontotoc; Dr. A. G. LeRoy, vice-president, Dr. W. H. Anderson, delegate, Prentiss; Dr. D. D. Baugh, vice-president, Dr. J. R. Williams, Chickasaw; Dr. W. J. Aycock, vice-president, Dr. E. B. Young, delegate, Calhoun; Dr. Jim Green, vice-pres., Dr. W. H. Eason, delegate, Lee; Dr. C. E. Boyd, vice-president, Dr. J. R. Burdine, delegate, Monroe; Dr. M. W. Robinson, vice-president, Dr. Stanley Hill, delegate, Alcorn; Dr. N. C. Waldrop, vice-president, Dr. E. B. Brackstone, delegate, Tishomingo; Dr. H. L. Scales, vice-president, Dr. F. B. Long, delegate, Oktibbeha.

NORTHEAST MISSISSIPPI DENTAL ASSOCIATION

At its regular all day meeting on January 18th in Tupelo, the Northeast Mississippi Dental Association will hear as clinicians Dr. James J. Vaughn, Dr. Robert A. Redus, and Dr. Harvey Reese, all of Nashville.

Dr. Vaughn will give "Restorative Dentistry." He will show the indications for opening-closing, and restoring the functional individual bite and occlusion. Also the preparations, instrumentaria, attachments, inlays, crowns, and proved abutments. He will make clear the many advantages of fixed bridgework.

Dr. Robert Redus will give a clinic on "Inlays and Porcelain Pontics." This will include the different alloys used in castings, their advantages and places in dentistry; the important part porcelain plays in the construction of the many types of facings and bridge pontics in order to assure the most pleasing and best esthetic and artistic effect. Dr. Redus will show the use of X-rays in diagnosis, operative dentistry, and finally, the completed case.

Dr. Harvey Reese will give "Practical Procedures in Funn Dentures." This will include relation, arrangement of teeth for esthetics, denture materials, investing, and flasking, finishing, and delivering the case to the patient.

Dr. Vaughn, Dr. Redus, and Dr. Reese are all general practitioners and know and understand the problems of every-day dentistry. All three were graduated from Vanderbilt University.. Dr. Redus is at present president of the Fifth District Dental Association, of which Nashville is a part, and has appeared before numerous dental organizations throughout the country. Dr. Vaughn is a past president of the Fifth District Dental Association and the Tennessee State Dental Association, and has given papers and clinics throughout the south. Dr. Reese is also a past president of the Fifth District Dental Association and has cliniked extensively in Kentucky, Tennessee, and Miss.

Officers of the Northeast Mississippi Dental Association are as follows: Dr. J. E. Hubbard, Aberdeen, president; Dr. J. M. Smith, Calhoun City, vice-president; Dr. Fayette Williams, Corinth, secretary; Dr. Bruce Pearce New Albany, treasurer.

PHYSICIAN WAS PROMINENT IN MISSISSIPPI AFFAIRS

SHELBY, Miss., Jan. 1. — Dr. Wesley William Hall, 60, died here today at 8 o'clock at his home.

Born in Lauderdale County, he attended Popularville High School, the Mobile Medical College, and was graduated in medicine in 1899 from the University of the South. He practiced 15 years at Lumbertown, a year at Ruleville, four years at Gunnison and 16 years at Shelby.

He was a member of the Delta Medical Society, the Mississippi State Medical Association, the Mississippi State Board of Health, president of the State Board of Health from 1922 to 1924, chairman of the Mississippi

State Sanatorium building committee, Masonic leader and a deacon of the Shelby Baptist Church.

He leaves his widow, Mrs. Carrie Ellis Hall; two sons, Dr. W. W. Hall, Jr., Shelby, and Dr. Toxey E. Hall, superintendent State Charity Hospital, Jackson; a daughter, Elizabeth, senior at Delta State Teachers College, Cleveland; three brothers, Toxey and Lee ., Columbia, and Jess A., of Jackson; and two sisters, Mrs. J. L. Summer, Newburn, Miss., and Mrs. S. L. Ryan, Bay Springs, Miss.

Funeral services will be held here at 10 a.m. tomorrow.—Commercial Appeal.

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ANNUAL MEETING OF THE CENTRAL MEDICAL SOCIETY 1936

The Central Medical Society Annual Meeting was opened with a banquet on the Robert E. Lee Hotel Roof at 6:30 p. m. on December 1, 1936. Dr. Garrissn, H. F., Sr., acted as toast-master, calling on Dr. F. L. Van Alstine and Dr. Eubanks who gave interesting reports on the State Medical Association. The following members of the society were also called upon to say a few words: Drs. Kennedy, Womack, Jones, Long, Wall, Underwood, and each of the program committee which is composed of Drs. Hand, Wilson, Harris, and Owen. There was a good attendance and everyone seemed to enjoy the banquet to the fullest extent.

At the absence of the president, Dr. Wall presided at the business meeting which followed the banquet. Dr. R. G. Leland, Director of the Bureau of Medical Economics A. M. A. was the orator of the evening. He was introduced by Dr. Underwood and at this time gave a very interesting address on the broad subject of "Economics and Ethics of Medicine" which was thoroughly enjoyed.

Very good reports were read by the secretary, treasurer, and chairman of the various committees. These showed 1936 to be an outstanding year in the Central Medical Society.

Officers elected for the year 1937 are:

President: Dr. Lawrence W. Long of Jackson, Miss., succeeding Dr. E. L. Walker, of Magee, Miss.

Vice-president: Hinds, Dr. I. C. Huggins, of Jackson, Miss.; Leake, Dr. J. M. Barnett, of Okolona, Miss.; Madison, Dr. I. Edwards, of Canton, Miss.; Rankin, Dr. J. B. Wadlington, of Florence, Miss.; Scott, Dr. J. M. Townsend, of Forrest, Miss., Simpson, Dr. A. E. Kennedy, of Magee, Miss.; Yazoo, Dr. Carl Day, of Yazoo City, Miss.

Secretary: Dr. Gayden Ward of Jackson, Miss., succeeding Dr. Lawrence W. Long, also of Jackson.

Treasurer: Dr. N. F. Kendall of Jackson, reelected.

Dr. D. W. Jones was re-elected as chairman of the board of censors.

The following delegates were elected: Hinds, Drs. Long and Noblin of Jackson, Miss., alternates, Drs. Hand and Womack of Jackson. Leake, Dr. B. R. Wilson of Carthage, Miss., alternates Dr. Puryear of Carthage, Miss. Madison, Dr. J. B. Howell of Canton, Miss., alternate, Dr. I. Edwards of Canton Miss. Scott, Dr. R. B. Austin of Forrest, Miss., alternate, Dr. W. E. Anderson of Forrest, Miss. Simpson, Dr. A. E. Kennedy of Magee, Miss., alternate, Dr. H. E. Frizell of Vaughan, Miss.

Committees appointed by the president are: Program, Dr. H. F. Garrison Sr., chairman; Dr. Robin Harris, Dr. V. D. Hagaman, Dr. R. W. Hall, and Dr. Geo. Atkins.

Public Health and Legislation: Dr. Noblin, chairman. Dr. Barksdale, Hinds, Dr. H. H. Puryear, Leake; Dr. R. W. Smith, Madison; Dr. J. B. Ainsworth, Rankin; Dr. W. E. Anderson, Scott; Dr. W. D. Hickerson, Simpson; Dr. H. E. Frizell, Yazoo.

Memoirs: Dr. N. C. Womack, chairman; Drs. J. E. McDill, and J. P. Wall.

Executive: Drs. E. L. Walker, L. W. Long, N. C. Womack, D. W. Jones, W. E. Noblin, and H. F. Garrison Sr.

FROM DR. R. N. WHITFIELD

It is a great pity that we have no machinery by which we may learn the true state of affairs relating to the connection between alcohol and automobile tragedies. It is my opinion, however, that from thirty to forty per cent of the automobile wrecks and deaths are due directly to the effects of alcohol. It has been scientifically demonstrated that one ounce of alcohol circulating in the blood of a motor vehicle driver will render his reaction to danger less acute, and since so many situations arise where instant reaction to danger is necessary, the man with the one or more ounces of alcohol circulating in his system will fail to make that reaction necessary to avoid a catastrophe.

It is but reasonable to arrive at the conclusion that a larger percentage of our motor vehicle deaths are due to this cause when one knows that there are approximately twenty-six million motor vehicles in operation in the United States and that alcohol is consumed on a very wide scale. According to a recent report in *The Pathfinder,* the per capita consumption of alcoholic beverages last year were: beer, 11 gallons; wine, .37 gallons; and liquor, .88 gallons. However, nobody knows how much bootleg alcohol is consumed in this country, and if the non-drinkers are excluded, it is highly probable that the per capita of alcoholic liquors consumed in this country would be two or three times the amount shown. Therefore, when there is such an enormous consumption of alcohol and such an enormous amount of driving, it is not a far stretch of the imagination to assume that alcohol plays a large part in motor vehicle tragedies.

It is a lamentable fact that motor vehicle deaths in Mississippi to the first of October of this year have shown a thirty-five per cent increase over the same period during the past year.

CORINTH JOURNAL CLUB

By Dr. W. W. Hall

The Corinth Journal Club is strictly a study club which meets monthly and presents abstracts of outstanding papers published in special journals. It is an open organization and all members of the Alcorn County Medical Society are eligible to join. Requirements for membership are: (1) subscription to a special journal not already being received by any of the members (2) pledge to attend all meetings, and (3) willingness to work. Each member reviews his journal selects one or more outstanding articles which are presented in abstract at the next meeting. Meetings are held the second Tuesday in each month at the office of the host. Each member takes his turn at acting as host, following the alphabetical sequence of names. No refreshments are served, no dues assessed. At the present there are six members and the following publications are being reviewed: The Journal of Bone and Joint Surgery, The American Journal of Surgery, Annals of Surgery, Journal of the American Medical Association, American Journal of Pediatrices, and Archives of Otolaryngology.

BOOK REVIEW

Interpretation of Laboratory Findings, by Raymond H. Goodale, M.D., pathologist, City Hospital, Worchester, Mass., is so consise and so practical that any practitioner can ill afford to be without a copy. It gives compact laboratory data that every physician needs every day. *Part one* is made up of normal values and the interpretation of abnormal values of the various body fluids and secretions. Under *part two* diseases are listed alphabetically, and under each disease the results expected, and the time at which they become positive listed in many instances. In *part three* there is a discussion of the physiologic pathology of the body fluids and excreta. In *part four* methods of collecting and preparing body fluids and tissues for the laboratory are given. This book is not only helpful in the interpretation of the tests, but by studying it, unnecessary tests may be avoided and the patient spared he expense. It is exceptional that so much valuable and practical information may be had at such a low cost. Price $2.25. F. A. Davis Co., Philadelphia, publishers.

BOOK REVIEW

The Practice of Medicine by Jonathan Campbell Meakins, M.D., L.L.D. This is a very complete volume concerning generally the practice of medicine. As the author states, he does not intend this book for the specialist but rather for the student and general practitioner. There are over 1300 pages including 505 illustrations with 35 in colors. The illustrations are very instructive and the reader can get much valuable information and with more clarity than with a word description. The introductory chapter is especially interesting and informative. "The practice of medicine is probably the most interesting profession in the world." With this statement the author begins his treatise on the practice of medicine and its intimate dealings with human beings. Dr. Meakins gives many interesting sidelights on general practice and the "family doctor." Each system of the human body is discussed separately and the possible diseases affecting it are discussed concisely and fully. There are also instructive chapters on infectious diseases due to abnormal environments and diseases due to chemicals and drugs. The doctor would make his library much more complete by having this volume on the practice of medicine.

Published by the C. V. Mosby Company, St. Louis, Mo.

Syphilis in Northeast Mississippi*

R. B. WARRINER, M.D.
CORINTH, MISS.

Gentlemen, this is a resumé of a part of the multitudinous amount of recent literature on syphilis as it applies to certain phases of the disease in Northeast Mississippi. You may not agree with some of the statements herein presented, but the majority will be things you already know.

The author wanted to write a paper on syphilis after reading the extract of the article here distributed to you. This extract appeared in the July issue of the *Readers Digest,* a magazine for the layman, numbering millions of subscribers.

If there were a single purpose to this paper --"Siphilis in Northeast Mississippi"—it would be to emphasize the importance of doctors doing all in their power to eradicate syphilis before the people make it necessary for the public health service to do so, but the latter has a definite usefulness to the program, for which we are grateful.

The article will show what the layman knows and expects of the doctors. The *Readers Digest* is widely read and other articles like this one are being published frequently in lay magazines, educating the people as to transmission, etiology, symptoms, and effectiveness of the proper treatment, and that is as it should be.

On page three of the reprint you read:

WHY DON'T WE STAMP OUT SYPHILIS?
Condensed from Survey Graphic
Thomas Parran, M.D.
Surgeon General, U. S. Public
Health Service

"A plague that disables half a million Americans a year; a plague that does a hundred times as much damage as the dreaded infantile paralysis; a plague that is wrecking lives, shattering homes and filling institutions all over the land with its insane, blind, feebleminded or unemployable victims—that is syphilis. It bids fair to become the great American disease.

"And yet we might virtually stamp out this disease were we not hampered by the widespread belief that nice people don't talk about syphilis, that nice people don't have syphilis, and that nice people shouldn't do anything about those who do have syphilis.

"This national hush-hush policy of ours has hushed up also the fact that syphilis ranks with cancer, tuberculosis and pneumonia as one of the four greatest killing diseases; that probably over half of the victims of syphilis have acquired the disease innocently, and that, outrageous as it may seem, few of our young men and women past 21 have never been exposed to the risk of syphilis. Remember that a kiss may carry the germ. In an eastern state recenty one of our health officers traced 17 cases of syphilis to a party at which kissing games were played.

"We have justly been concerned about the automobile accidents in this country which resulted, in 1934, in 107,000 cases of permanent disability. How can we continue to ignore syphilis when we realize that it disabled nearly five times as many in the same year? Or that it is responsible for more than 10 per cent of all insanity, 18 per cent of all diseases of the heart and blood vessels, for many of the still-births and the deaths of babies in the first weeks of life?"

Then on page two you see that there are *ten and a half new cases of syphilis* to four and one-half new cases of scarlet fever, to two and one-half new cases of tuberculosis, to two patients from automobile accidents, causing permanent disability; to one new patient with diphtheria. Then, on page 5 we see from the illustration that *syphilis strikes one out of ten adults.*

On page 11 we find a summary:

"The things to do are clear:

1. Find syphilis. The obscure cases will never be found in time except by the Wassermann dragnet.
2. Treat syphilis promptly. A few days' delay may mean failure of treatment.

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*Read before the Northeast Mississippi 13-County Medical Society, Tupelo, Dec. 15, 1936.

3. Examine for syphilis the family and all other contact of the syphilitic patient.

4. Prevent the birth of syphilitic babies by requiring blood tests before marriage and early in each pregnancy.

5. Teach syphilis. The facts about it must be known to all the people.

The methods may be worked out to fit our particular American need. If we can find better ones we need not borrow from the European experience."

And at the bottom of that same page:

"Syphilis must be the next great plague to go. Our children will hold us criminally careless and incompetent if, with the means at hand, we fail to end this scourge within our generation. This is one contribution we know how to make toward a safer, happier world for them to live in."

This article seems very interesting because it is an excellent resumé of the situation. The thing that it leaves out is that *we,* as doctors, do *not want state medicine.*

Syphilis is going to be treated more than it is at present, and, as a rule, at a lower cost than now. The people as an average, can not afford to pay the expenses required today for proper diagnosis and treatment. But it is going to be the average man who will vote to have satisfactory protection with the available knowledge. The immediate thing for us to do is to find the cases, using the State laboratory to help diagnose our cases, if we so desire.

And, to find new cases by running routine tests on all patients is not state medicine. But if we wait much longer to begin this program, the people will force the public health service to extend their activities. If we prove we are willing to find the cases, then, in time, the chances are the state will furnish the medications free.

There are more than enough syphilitic cases for us all to treat. By the 1930 census there are 302,000 people in our thirteen counties. By the 1934 census of the A. M. A. there are 196 doctors in active practice in our thirteen counties. That means there is an average number of more than 1500 patients to the doctor.

A recent survey, wherein cards were mailed to each of the doctors in our society, asking for records or estimates of the number of positive Wassermanns reported in the first nine months of this year, was fairly well responded to, but, of course, was incomplete.

Twenty-four doctors reported in this survey 535 positive cases, but during the same period the entire 196 doctors reported to the state morbidity record only 384 cases. So, you see, doctors are not sending their reports to the central record office. At any rate, the chances are the survey reports were not low. But using them, there were, averaged, 23 cases to the doctor under care.

Statistics show that *one out of ten adults* has syphilis at some time; so allowing that all of the population are not adults, there are more than 100 cases of syphilis for each of us that should be under our care that are not, at present.

Since October 15 the author has attempted to take routine Wassermanns on all patients who came to his office; of course, it has not been entirely possible yet, but there have been 80 blood tests sent to the state laboratory with the negroes averaging, not 20 per cent positive as is frequently quoted, but 55 per cent positive. It has been hard to get in touch with some of these positives because treatment for the negro is a problem in itself even if we gave him the shots free. The white patients ran 2.5 per cent positive. Most statistics quote from 3 to 10 per cent in the white race.

So you see there are numerous patients to treat and out of these 100 cases that are yours most of you would get the money spent in diagnosing all cases from the new ones requiring treatment and who can afford to pay. But even if you do not treat syphilis it's just as much your duty to help diagnose the condition in your patients as it is for the man who treats the disease; and when you find one case in an intelligent, unsuspecting individual who may, or may not, have caught it innocently, he is truly appreciative.

If the layman will not take treatment after we diagnose the condition, or if he can not pay for the drugs, etc., for treatment, then that is the responsibility of the state to help us remedy the situation; but if the doctor does not attempt to diagnose the cases, by taking routine blood tests, the doctor will, before long, be responsible to the state.

One new approach in the search for the most contagious cases has been in the Practical Epidemiology of Syphilis; and one of the leaders in the movement has been Dr. Dudley C. Smith, a Mississippi man at the head of the department of syphililogy and dermatology of the University of Virginia. He says that they have gotten excellent results by attacking this transmissible infection by tracing source cases and following up contacts of syphilitic patients and further, that

"This is a direct epidemiologic procedure and if pursued intensively and tactfully is effective. The principle of this approach is identical with that used in the control of other infectious diseases. The main difference is that sexual contacts are to be determined. Because of the tendency to secrecy the problem is somewhat difficult, but on the other hand, the number of possible sources and contacts are limited, which simplifies the investigation.

"It has been the policy at the University of Virginia Hospital for several years to investigate epidemiologically all early and familial cases of syphilis and any other cases that would seem to warrant scrutiny. This investigation is directed toward ascertaining the identity of the person from whom the patient acquired the disease and the identity of other persons exposed to the same source or to the patient, following infection.

"During the routine history and physical examination of the patient the fundamental characteristics of the disease are explained. This includes transmission, pathology, complications, standard of treatment, and the probable outcome. Language that the individual patient can comprehend is used. The moral aspects are minimized and the medical phases are emphasized. Every effort is made to impress the patient that all information obtained is confidential. With the proper build up, almost every patient will give the names and addresses of his sex partners and close associates. After obtaining this information the patient is asked to notify those concerned and advise them to be examined. In addition, a letter is sent to the contacts advising them to be examined. It is remarkable that almost all patients attempt to cooperate fully when properly approached. The patient himself, in most cases, becomes to some extent a sanitary worker. Every case of syphilis diagnosed presents an opportunity for discovering other foci of infection.

"This investigation probably cannot be done successfully by nurses or social workers alone. They, of course, can be of great aid in following up information obtained by the physician. The use of legal measures is sometimes necessary. It has been stated that this type of investigation would be less successful in a large city. On the contrary, rapid, cheap transportation, more clinic facilities, social service departments and the like would seem to make it easier.

"Other important results of this intimate relationship of patient and physician are the establishment of the patient's confidence in treatment and his education as to proper treatment. He is then more apt to continue treatment regularly, increasing his chance of cure and decreasing the possibility of an infectious relapse. Recently it was reported by the Cooperative Clinical Group that 84 per cent of patients with early syphilis discontinue treatment before they are rendered permanently non-infectious. In Dr. Smith's clinic 41 per cent of patients with early syphilis, observed during this period (1930-1934 inclusive) of intensive effort directed toward determining source cases and contact returned for the minimum standard of treatment. This figure is exclusive of patients referred to other physicians or clinics. This was accomplished without the aid of social service or follow-up workers."

The folowing chart indicates the number of new cases found:

Exposed Contacts

				Adm. to Clinic				Estimated Infected	
Infected Cases	Named	Ind. Represented	No. per Case	Total		Cases Infected		Total	No. Per
				No.	%	No.	%	No.	Case
207	511	421	2.03	171	40.6	126	73.7	316	1.52

The interpretation of the blood serological tests is a matter of importance but often difficult. As practicing physicians we desire a serologic test for syphilis that will indicate the presence of the disease in all persons who have it, and in none who do not have it. At present we have no such test; but with all data classified most authorities state definite diagnosis.

Certain medical and surgical diseases with accompanying high fevers give false positives in a small percentage of cases. Wassermanns are quoted as giving .7 of 1 per cent false positives; Kahns about the same.

A lesion with a correctly done positive dark field examination is definite proof. History of a lesion within six months to a year and with a 1— 3 plus Kline-Young or Cholesternized Wassermann means that it is very suspicious and further checks are necessary.

In the recent Serologic Conference held by the League of Nations Health Section at Copenhagen, Denmark, the general superiority of the precipitation tests and particularly of the Kahn on the score of specificity and sensitivity was apparent. The conference which represented the foremost serologic accomplishment of the world agreed that for the present at least both a Wassermann and a precipitation procedure, e.g., the Kahn, should be used by all laboratories desiring to achieve the highest degree of accuracy and trustworthiness in their reports.

When the Wassermann and Kahn are one plus or more, positive, usually the others are 3—4 plus and when checked by another laboratory and with the history of a lesion, or contact with a positive case, deserves treatment. In cases previously treated a one plus or more, with any of the tests, checked, is considered worthy of treatment.

Stokes, Fitzgerald, Meinicke, and Kolmer were the authorities for these remarks on the serological diagnosis.

The importance must be realized of treating patients early in order to get 85 per cent cures instead of 64 per cent cures; and likewise, in order to protect others when the case is most contagious; namely, when the lesion is present. Mass sterilization of certain groups of the negro population based on extensive serologic surveys has been very effective.

The moral question has not been discussed but proper presentation of the facts will make it much more successful. Ministers' wives were just as interested in hearing from their blood tests as anybody else and did not seem to mind any more than anyone.

Education, particularly of the youth, routine blood tests and convenient treatment, with the medications furnished by the state will improve the situation markedly in time, possibly making laws to force treatment unnecessary.

In conclusion, the author wishes to recommend (1) that we consider every patient both syphilitic and a carrier of syphilis unless proved otherwise, remembering that each patient treated early, sufficiently, may keep hundreds more from having the disease; (2) that the diagnosing and treatment of syphilis should be in the hands of the doctors with the way made easy by the Public Health; remembering also that before long *the people are going to demand the reasonable treatment and protection they deserve.*

DISCUSSION

DR. W. H. CLEVELAND: Being in health work I am particularly interested in the prevention and control of syphilis, realizing that it is one of the most prevalent and serious of the communicable diseases with which we have to deal.

Dr. Warriner has very ably discussed syphilis in his paper, including in his discussion the modes of transmission, method of diagnosis, prevalence, treatment and prognosis. I shall not try to add very much to his paper, but I want to emphasize some of the things included in his discussion. I was very much impressed with the method of case finding. We all realize that these cases have to be found before they ever receive treatment. His idea of regarding patients, possible cases, until proven otherwise, I think is very good. I think you can assume this attitude toward this disease without being regarded as a fanatic on the subject. In my experience in examination of children, both pre-school and school age for the past few years, I have picked up numerous cases which had not previously been suspected. However, most of these cases showed some eye condition, skin eruptions or mouth ulcers, which would lead one to suspect syphilis. In this connection, I want to relate two instances which illustrate what an epidemiological study of a case will sometimes reveal. While helping a civic club deliver packages on Christmas Eve day to indigents I was asked to look at a three year old negro child who had a very bad eye condition. Arrangements were made for him to see an eye specialist, who suspected syphilis immediately. A Wassermann test was positive. Further investigation revealed that the father and mother both had syphilis, had secondary eruption with positive Wassermanns. Wassermanns on three other children were taken, one of them was positive. According to the history these cases were all acquired and not congenital. In another instance a case was discovered in one of our most remote rural schools in a boy six years of age, who had secondary eruption. This case was found on regular routine inspections for communicable diseases, the primary purpose of which was to rid the school of scabies and conjunctivitis. The lesions on this boy were so typical that contact was made with the parents and further investigation revealed the fact that out of a family of ten, six were infected with syphilis. Still further investigation revealed that a young seventeen year old girl in the family had contracted the disease from a sweetheart, and had masticated food and fed to the baby, which became infected and the baby in nursing the mother had infected her. The primary lesion in the mother was on the nipple and this case was the source of infection for the father. Two other children, ages four and eight, had evidently received their infection from chewing gum after the first case that developed in the family. I wish to state further that this happened in 1931 and 1932, and treatment was secured immediately which was continued until the latter part of 1935, and Wassermann tests made every six months since 1934 have been negative on all of them. The other four members of the family have remained free from the infection. Four of these cases had contracted the disease innocently, that is, other than by sexual cohabitation. These experiences and others lead me to believe Dr. Warriner's opinion more strongly that a very large per cent of cases of syphilis contract the disease innocently. It has also caused me to change my opinion, which was at one time that practically all cases of syphilis contracted the disease by sexual cohabitation. The doctor has discussed the serological test. In my experience I have had a few that I thought were false positive Wassermanns, and in these instances the precipitation tests were negative. However, I feel sure that this does not happen in all instances, but I believe that it is well to check all Wassermanns with the precipitation test.

Dr. Warriner has stressed the educational part of the program, which is so necessary for the control of the disease and I believe that in addition to what he has said, that the medical profession as a whole could do a great deal toward preventing this disease by teaching the use of prophylactic remedies after possible exposure, more particularly to the young men. I understand that this procedure has proved very useful in the Army and Navy, and other features about it that are very important, is that it prevents other venereal diseases as well.

I believe that a great deal of benefit can be derived from this procedure if only all the men could be thoroughly informed about it.

Dr. Warriner has given you his views as to the part that the medical profession and the public health service should play in the eradication of syphilis, and I certainly do appreciate his attitude very much.

He has given us an excellent paper and I think we should all take the opportunity to study it more thoroughly even after this meeting is over.

Dr. R. E. Honnell: I only want to indorse and emphasize what Dr. Warriner has said in his paper. Any disease that causes as much suffering, distress, and such a percentage of our deaths, directly and indirectly should be brought before the medical profession in a forceful manner as Dr. Warriner has just done. In order that we all may be more alert in making diagnosis and instructing each patient what the treatment consists of and the necessity of continuing the treatment until we have a cure or as nearly as possible.

I want to emphasize the importance of people being instructed through the press, magazines, lectures by physicians instructing people to consult their physician who will make the diagnosis and give the proper treatment when needed.

The state hygienic laboratory is available to any and all physicians in the state, and we get the information promptly. I insist that if we are more alert we will be able to prevent the spread of this disease.

The Pathology Of Syphilis*

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Dorland's Dictionary says:

"Syphilis, the name of a shepherd infected with the disease in the poem of Fracatorius (1530), in which the term first appears. According to some the word is derived from sun, together and philene to love. A contagious venereal disease leading to many structural and cutaneous lesions, due to a microorganism, the Spirochae'ta pal'lida or Trepone'ma pal'lidum. It is generally propagated by direct venereal contact or by inheritance. Its primary local seat is a hard or true chancre, whence it extends by means of the lymphatics to the skin, mucosa, and to nearly all the tissues of the body, even to the bones and periosteum."

THE PATHOLOGY OF EARLY SYPHILIS

The treponema pallidum, discovered in 1905 by Schaudinn and Hoffmann is known to be the cause of syphilis. Noguchi, in his classical work in 1913, proved it to be the cause of tabes dorsalis. Udo J. Wile has proved in recent years, both by culture and demonstration by impregnation method, and use of the dark field illuminator, that this same organism is the cause of paresis. With these facts as a basis, it is well to trace the migration of this organism through the human body, and to observe the changes that it causes.

The histological study of the chancre in its various stages reveals to us practically the entire pathology of syphilis.

The intact skin or mucous membrane offers an impenetrable barrier to the entrance of the organism of syphilis, but when the outer lifeless cells are stripped off and the narrow lymph space exposed, the treponemata, equipped as they are for drilling purposes, bore between these cells and come to rest in the intercellular lymph spaces, which, in reality, are the tortuous arms of the pigment forming cells, which supply the prickle cell layer with nutrition. All the factors for their propagation are present—warmth, food, darkness, and a minimum amount of oxygen.

Here they multiply in number and activity, and during their incubation period cause no tissue changes whatsoever. A few leucocytes make their appearance, but they seem to be on friendly terms with the invading parasite. This period of harmony may last from five days to six weeks, when the small lymphocytes make their appearance. They crowd out the treponemata and pack solidly the space formerly occupied by them; the treponemata then move outward and downward, the greater majority follow along the lymph spaces, but a few pierce the small vessels and gain entrance to the blood stream. The fate of the latter is unknown. They may be killed by the natural immunity of the body, but more probably gain entrance at this time to its deeper structures. The lymphocytes follow the syphilitic organisms and their place is taken by the plasma cell; at this point the primary lesion makes its appearance and is produced by the rupture of the upper layers of the mucous membrane. There is very little induration. As the treponemata increase in number, the lymphocytes and plasma cells also become more numerous, and the third factor, the young, connective tissue cell, makes its entrance. The marked induration in the chancre—the primary lesion —is caused by the firm packing of lymphocytes and plasma cells in the spaces formerly occupied by the treponemata. There are now three marked zones of tissue change. The outer is bounded by a band of treponemata, evidently unmolested; the middle zone consists of pure lymphocytes; and the inner of plasma cells and young connective cells. These zones blend imperceptibly into one another.

Simultaneously with these changes, other activities have been progressing; the neighboring blood vessels have reacted to the general uprising by a marked endo-and peri-arteritis. Each vessel has a collar of lymphocytes or plasma cells, depending on the age of the involvement; elastic tissue fibers and small muscle bundles have been broken up or have had serious injury; lymph channels have been widened and proximal lymph nodes involved. The same tactics are used in the lymph nodes, but here the treponemata can rarely be demonstrated and then only in the stroma. The treponemata gradually advance, meeting resistance by the lymphatic system at every step, until finally they reach the great inguinal system of lymphatic nodes. When the stage of inguinal involvement is reached, the Wassermann reaction should be positive in nearly all cases. From the inguinal lymphatics the treponemata advance until they pour in great numbers into the general circulation through the ductus lymphaticus.

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*Read before the Clarksdale and Six Counties Medical Society, November 13, 1935.

MACULAR ERUPTIONS.—The first rash, the macular eruption or roseola, now makes its appearance and is usually of short duration. We believe, with others, that this rash is simply a protein reaction due to the union of the specific organism with the specific anti-body, which sets free the spirochetal endotoxin in the skin. There are many observations which support this contention. First, the macular eruption is fleeting. Second, repeated histolcgical examinations of numerous macules excised from many individuals and treated with varied stains and impregnation methods (gold, silver, lead) have failed to reveal any treponemata. Elastic tissue spirals are often mistaken for syphilitic organisms. Third, Herxheimer's reaction never occurs on top of a roseola. A few treponemata escape to bury themselves in the lymph spaces of the skin.

PAPULAR ERUPTIONS. — The parasites which gain entrance to the skin effect the same changes that they do in the chancre, modified only by the fact that the skin has a tough outer layer, and therefore, seldom ulcerates. Ulcerative secondary papular eruptions do occur and these lesions often swarm with treponemata.

In the papular eruption the treponemata grow in the interspaces, causing the individual skin cells to become edematous. The papule arises out of a flat surface. The characteristic blood-vessel changes take place below the papule. Each papule, then, is, in reality, a miniature chancre and acts as an incubator for the further propagation of the treponemata. In time, the resistance of the body is raised to such an extent that these organisms are killed in situ and the papular eruption resolves spontaneously.

At this point the age specialization begins with the treponemata pallida, and special organs are attacked which may not show the effects of this invasion until years later. It is reasonable to suppose that early in the course of the disease organisms found lodgment in these special tissues and that the immune forces of the body overcame them. However, a certain number must have been present that were not destroyed, and to these resistant organisms are due the credit for the later involvement. They attack only certain tissues and not others, although there are certain combinations which do sometimes exist. Some of these organisms attack the bone, others attack the cardiovascular system, while still others attack the meninges or the substance of the brain, producing paresis, and others attack the substance of the cord, producing tabes dorsalis. Still others attack the viscera, especially the liver, although the spleen, the pancreas, the stomach, the intestines (especially the rectum), are sometimes involved. Still others may attack only the skin, forming annular or serpigenous eruptions, etc.

CONDYLOMATA LATA.—We now pass from the early to the late secondary stage. The few treponemata which have escaped destruction find their way to the mucous membranes, and especially the skin about the gluteal fold. They often multiply with great rapidity and form comparatively large lesions, the condylomata. The treponemata have their greatest activity in the interspaces between the cells of the prickle cell layer. The changes in the corium are secondary. With the exception of the widening lymph spaces, the edema of the individual epithelial cell, the presence of a few leukocytes and the long finger-like projection of epithelial papilla, there are no changes. The presence of the staphlyococcus or similar organism may cause small intrapapillary abscesses to be formed. Marked pathologic change is found in the corium, which is rich in cell units. The blood vessels show great changes. In all this rich mass of cells, blood vessels, fat, elastic and muscle fibers, not a single treponemata is found, although thousands of them are present in the epithelium. It is easily perceived that the condyloma is a hotbed for the propagation of innumerable treponemata.

ANNULAR ERUPTIONS.—The annular eruptions are of especial interest, as a study of their pathology upsets most of the theories as to their formation. A cross section of one of these interesting lesions reveals the following: The ridge of the annulus is formed by a very large broad papilla, three times as long and twice as broad as its uninvolved neighbor. The advancing edge of the papilla under low-power lens shows apparent disintegration of the epithelial cells, but under high power these cells are seen to be pushed apart by leukocytes. Between these cells and scattered among the leukocytes are numerous treponemata pallida, but no lymphocytes.

THE PATHOLOGY OF LATE SYPHILIS

The pathology of late syphilis is divided into four phases.

(A) The stage of invasion, representing that time when the treponemata penetrate the special tissue, finding their way to the part through the medium of the small blood vessel whose wall they pierce, some of them involving the artery or vein itself and others gaining the perivascular lymph space where they multiply, and by their migrating power advance between muscle strands, along nerve fibers, or between skin and bone cells. They do not enter within the cells. During this phase there are no symptoms of disease, since tissues will tolerate the treponemata for long periods of time without producing local or general reactions. No symptoms or signs are produced by the mere presence of the specific organisms. They are there, but unnoticed by the host.

Their destruction is this stage by therapeutic agents, given in a constant and persistent manner, is followed almost universally by lasting good results.

(B) The stage of infiltration is the next step in all syphilitic involvements. The attention of the body has at last been called to the presence of the treponemata whose activity have been purely extracellular, with the production of irritating endotoxic substance. Swarms of lymphocytes followed by plasma cells are rushed to the involved areas, and the treponemata precipitantly retire to new areas. The spaces in these involved areas are limited, since they consist of blood-vessel walls perivascular lymph spaces, or spaces between individual cells, such as elastic tissue fibers, muscle cells, or nerve fibers. The packing of these new and strange cell elements (lymphocytes, etc.) in these limited spaces will, in time, close off the blood vessel and injure the muscle and elastic tissue fiber, kill the nerve filament or parenchymatous cell, or starve the bone cell by closing up its nutritive channels.

This stage is a blessing and a curse. It draws away the attacking organisms, but by its activity, added to the destructive substances left by the treponemata, it will in time destroy the very tissue it seeks to protect. This phase in the pathological process is represented by acute signs and symptoms in the diseased individual. The production of sudden auditory disturbances, which very rapidly proceed to complete deafness or visual disturbances which may terminate in blindness, can be easily attributed to this phase of pathological process.

Here the therapeutic measures are followed by very good results and the arsphenamines are indicated.

(C) The stage of resolution. Following the cessation of the lymphocytic and plasma cell infiltration, the young connective tissue cell makes its appearance. This marks the beginning of the third phase or stage of cell resolution. These young connective tissue cells are taking the place of injured or killed cells, and, as they begin to mature, the plasma cell and lymphocytic cell begin to fade away. As resolutions proceed, the young connective tissue cell matures and ties the injured places together. If no vital cells are strangled in this process, repair takes place and function is restored to some degree. But, should the process infringe upon necessary cells, further damage is done. In the natural process of repair, time is allowed for the readjustment of the injured cell, so that it can retain at least a part of its function; but if this process is hurried by ill-advised treatment, cells that otherwise would have recovered by the slower process are completely destroyed.

(D) The stage of scar formation—the end result of all syphilitic pathology is now reached.

The young connective tissue has matured and contracted to its limit, the gumma has been transmitted into a fibrous scar or nodule. Whatever pathologic change is now produced is caused by the mechanical pressure of scar tissue, and its interference with the physiology of the part is permanent and cannot be eradicated.

Syphilis, then, is not a disease of connective fibers, but a general producer of that type of man organism to protect itself from the treponemata. From these barriers the organisms may escape years later to re-enact the same dramatic spectacle.

These four stages—invasion, infiltration, resolution, and formation of scar tissue—are common to all syphilitic processes, no matter what special tissue is involved. Our bird's-eye view of this pathologry represents the activity of one colony of treponemata alone. A hundred different colonies may be present and working at the same time in different parts of the same special tissue and may continue this process over a period of years before any definite signs or symptoms make their appearance.

For example, in involvement of the optic, auditory, or vestibular nerves, the treponemata probably gain entrance to the nerve through the blood-vessel supply of the sheath, so that the outer nerve fibrils are attacked first. It would be very unusual for every blood vessel under the sheath, for the entire length of the nerve so protected, to become involved at one time, but we can conceive how a few outer fibers might be involved, and as time went on the entire outer layer might be destroyed.

The symptoms and signs of optic neuritis or optic atrophy are not caused by the presence of the treponemata in and around the nutrient vessels and between the nerve fibers, but these phenomena are produced by the infiltrative process followed by scar formation. We can also see that, especially in the eye, this pathological process may arise in the nucleus of the nerve, in the nerve itself, or in its distribution to the retinae, or in any of the structures lying near the origin of the nerve or along its course, which may become abnormal and press upon these parts with sufficient force to cause them to secondarily degenerate.

In the light of this pathology, one can predict which conditions will do well under arsphenamine therapy and which ones will do badly.

SYPHILIS OF THE CENTRAL NERVOUS SYSTEM—NEURO SYPHILIS

Syphilitics with a primary sore and in the pre-eruptive stage occasionally show some slight abnormality in the cerebrospinal fluid, but these findings are not considered pathological.

THE CEREBROSPINAL FLUID IN EARLY ERUPTIVE SYPHILIS.—When early syphilitic eruptions make their appearance, the changes in the cerebrospinal fluid take an immediate bound upward. Twenty per cent have mild findings and 20 per cent more have moderate findings. Nearly all of these cases are symptomless as far as the central nervous system is concerned and usually a negative Wassermann is found.

The so-called late secondary syphilitic eruption as a class, shows the highest percentage of involvement of the cerebrospinal system from the standpoint of the fluid findings.

The estimation of the involvement of the central nervous system in early syphilis, as shown by the examination of the cerebrospinal fluid is in the neighborhood of 60 per cent. Wile, who has reported upon a larger number, concludes that the per cent is about 50.

CLINICAL MANIFESTATIONS.—The most common involvement of the central nervous system in early syphilis is a meningitis which is less complicated by vascular lesions or parenchymatous changes than any other type of involvement of the central nervous system. It usually involves the basal meninges more than any other part. Because of its purity of form the immediate prognosis is better than in other and older types. The most frequent finding is headache, not often acute or continuous, but dull and of daily persistence, and not localized in any certain place. Malaise, backache, jointache and a feeling of exhaustion on slight effort are common. The appetite is gone, the digestion is poor, and a copper taste persists in the mouth. The patient suspects that he has a temperature and often ascribes his ill feeling to malaria, bad liver, or intestinal condition. All of these symptoms persist for long periods of time after the eruption has disappeared.

The pupils are often unduly dilated and react a little sluggishly to light, but rarely are they unequal, irregular, or fail to react to accomodation. In a series of cases of late secondary syphilis examined for auditory disturbances, the air conduction was reduced by one-fourth to one-third. The reflexes in some cases are exaggerated. Marked fluid findings, indicating a specific meningitis, may be found without one symptom or sign. A parallel to this can be cited in paresis, or cases with all the serological findings of paresis and no symptoms of that disease.

MISSISSIPPI STATE MEDICAL ASSOCIATION
and
COMPONENT SOCIETIES

The Use of Radium in Carcinoma of the Cervix*

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Before going into a discussion of topical therapy, we will review, briefly, the anatomy, histology and pathology, with some classifications, of the structures in question.

The cervix, projecting as it does into the vagina, is, anatomically, divided into the vaginal and supravaginal parts. The supravaginal portion is of particular anatomical importance because of its intimate relation with the bladder, anteriorly, the ureters, laterally, and the rectum, posteriorly.

Histologically, the vaginal portion is normally covered with a stratified type of epithelium similar to that occuring on cutaneous surfaces while the endocervix is lined with high columnar epithelium. This epithelial layer is perforated in many places by racemose glands having a mucous secretory function. It has, however, been proved by Cullen[1] that glands may perforate the vaginal portion or stratified epithelium may line a greater portion of the cervical canal and be, in turn, perforated by secretory glands. This gives a satisfactory explanation for adenocarcinoma occuring in apparently ectopic locations and for the finding of epidermoid carcinomata well within the cervical canal.

Roughly, it is possible to classify carcinomata of the cervix in two large groups though transitional forms are common. These major types are adenocarcinoma and epidermoid, or squamous cell, carcinoma. The majority of cases of cervical carcinomata are epidermoid in orgin. Curtis[2] gives the ratio of adenocarcinomata as five per cent and Chalmers[3] in reporting five hundred cases, as ten per cent, to be adenocarcinoma. When it is borne in mind that squamous epithelium may be distributed along the endocervix, one can plainly see why borderline classifications might make for the apparent discrepancy.

Based on microscopic findings, epidermoid cancers have been classified according to the predominance of a given cell layer into

1. Spinal type because of interlacing spines on the cells.
2. Transitional type.
3. Fat spindle type.
   (Classification from Martzloff)[4]

According to this classification, the spinal type representing the more adult form and the fat spindle variety shows the least degree of differentiation.

In recent years following the revolutionary work of Broders,[5] more classification has been done with especial reference to the degree of differentiation based on mitotic figures, staining qualities, and other evidences of growth as representing premature cell development. This has served at times in aiding prognostic deductions.

For working clinical purposes, the division of carcinomata of the cervix according to the degree of extension and involvement, locally, has probably been of most value to use when seeing the patient. Division is made into four groups:

1. Involvement which is confined to a small area of the cervix.
2. Extension involving small areas of the uterine body. (It is extremely rare, however, that this condition is encountered due to the anatomical structure of the uterus, malignancies rarely progressing beyond Bandl's constriction ring. Cancer of the body of the uterus is more often primary than secondary.)
3. Extension into the broad ligaments or paracervical tissues.
4. Fixation of the pelvic structures with

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[1] Cullen T. S.: Vaginal Cysts. Bull. Johns Hopkins Hos. 1905.

[2] Curtis, A. H.: Obstetrics and Gynecology, Philadelphia, Pa., W. B. Saunders Company. 902, 1933.

*Read before the Section on Surgery at the Sixty-ninth Annual Session of the Mississippi State Medical Association, Greenville, May 5, 1936.

[3] Chalmers, H.: Am. J. Cancer (Jan.) 1935.

[4] Martzloff: Bull. Johns Hopkins Hosp. 141. 143, 1923.

[5] Broders, A. C.: Am. J. Surg. 1922.

practically no mobility.

It has been our experience that few persons seek the services of a surgeon or radiologist in the first two types but that most of our cases are seen after considerable fixation of the pelvic structures has occurred. We believe that a more active educational campaign designed to make both our lay and medical confreres more cancer-conscious might aid in bringing cases to adequate treatment earlier and reduce the mortality of cervical cancer.

The matter of using a so-called "malignancy index" with carcinoma of the cervix has been of some value though at times in radium therapy has given rise to confusing results. Ewing[6] believed that ray sensitivity could be estimated by the degree of anaplasia and vascularity or, in other words, the amount of differentiation,—the more wildly growing being more susceptible to radiation. Healey and Cutler[7] also believed that susceptibility to radiation varied from adult to anaplastic type and that in early cases the more anaplastic types offered greater prospect of a permanent cure. In the Radium Home at Stockholm, Wetterdal,[8] however, studied 354 cases of cervical carcinoma, histologically, and found the percentage of cures so nearly identical in all groups as to conclude that the microscopic appearance was of no prognostic significance. His classification was that of the League of Nations.[9] Our own experience, however, has been somewhat doubtful as to the prognostic importance of the various indices. Some patients with seemingly hopeless carcinoma of grade three will respond to radium therapy rapidly yet another case receiving the same pathologic report will soon die of recurrence. This probably depends upon the degree of metastasis which has taken place and which is impossible of determination. A certain definite proportion of these cases succumbs to malignancy of the lungs, liver or other organs of the body. We do, however, at times, feel that our best results come from the more anaplastic types of cervical cancer, especially those seen in the younger age brackets. We believe with Chalmers[10] that adenocarcinomata are radiosensitive.

In our service, radium is employed in the form of needles made by incorporating radium sulphate in glass tubes, these, in turn, being placed within Monell metal containers and sharpened at one end. The technique of employment is simple, the patient being given a lysol douche and an enema from one to two hours before going to the operating room. Other than receiving one-fourth grain of morphine, no other preparation is necessary. Antiseptic solutions of the heavy metals are not used because of the ionizing effect of radium. No anesthetic is usually required and the patient's co-operation is easily gotten. After visualization of the structures, biopsy is generally done with the radio knife. If pain is excessive during this procedure gas is administered.

We have no hard and fast rules governing the immediate application of radium but must, of necessity, fit each application to the extent and character of growth being dealt with. If the cancer be small and well demarcated, the cervix can be entered with ease. Needles are inserted into the cervical substance around the site of new growth and then other needles in capsules are inserted into the uterine and cervical canal to give cross irradiation of the broad ligaments and pericervical tissues. Where much ulceration and necrosis are present, if the cervical canal cannot be readily entered, 100 mg. of radium in needles are inserted into the cervix around and into the malignant mass as deeply as it is possible for them to penetrate. We have found the employment of 100 mg. adequate. After the radium has been planted, rectum and bladder are carefully packed away in order that they may receive a minimum of insult.

Our radium therapy is on the theory that one massive dose, like surgery in malignancies elsewhere, produces a more devastating effect on cancer cells than repeated small applications. We believe with Kilgore[11] that at times the so-called escharotic effect of radium may prove effective in destroying cancer cells which otherwise might be radio-resistant. For a total dosage, we employ a scale from 5000 to 5500 mg. hrs. This we believe to be near tolerance for radium applied directly to the cervix. We do, however, feel that in the event of recurrence we can employ another 1500 mg. hrs.

The post-operative course of these patients is without shock and few distressing symptoms have arisen during their stay in the hospital. Nausea is a frequent occurrence, probably from some effect of radium on the intestinal tract as we have noted it both when capsules had been inserted into the uterine cavity and when they had been planted only into the cervix. Catheterization is rarely necessary but is done early when indicated in order that the distended bladder may not approach the radium any nearer than absolutely necessary. When two or three days' hospitalization is completed, the patient is allowed to return to her home with instructions to remain at rest for

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[6] James Ewing: Radiology *13*: 313, 1929.

[7] Healey, W. P. and Cutler, M.: Am. J. Obst. & Gynec. *16*; 15-28 (July) 1928.

[8] Wetterdal: Acta. Obst. et Gynec., Scandinav. *14*: 302, 1934.

[9] League of Nations Health Commission, Report by Radiological Sub-Committee, 1929.

[10] Chalmers: Prior reference.

[11] Kilgore, A. R.: Surg. Gynec. Obst. *62*: 412 (Feb. 15) 1936.

7-10 days. After hospitalization, the only medication administered is borax or sodium bicarbonate in the form of a cleansing low douche. Discharge, due to sloughing of tissue, is usually profuse for from one to six months and frequency of urination with some evidence of proctitis may occur for the first thirty days. Proctitis has been rarely severe enough to cause inconvenience. (One recent case of carcinoma in a cervical stump left after supravaginal hysterectomy has, however, required the occasional administration of narcotics.) Some have reported scarring of the intestine with resultant obstruction following large doses of radium but such has not occurred in our experience. Hemorrhage caused by separation of sloughing tissue will occur in a small percentage of cases but the control of this bleeding has not proved difficult. Much is written about the occurrence of vesico- and recto-vaginal fistulae resulting from radium applications when invasion of those two structures by carcinoma had occurred. This has not occurred in our experience of over five hundred and twenty-five cases.

We believe that radium therapy is at this time the best means of combating malignancies of the uterine cervix. Radium has been used in conjunction with surgery and x-ray; surgery has been used with x-ray and x-ray and surgery have been used alone but statistics seem to show that radium by itself has produced a higher percentage of cures than any other method or combination of methods. From our experience, we would insist on initial massive doses of an adequate amount of radium, believing that this initial bombardment is more effective than smaller doses applied by the fractional method.

Although we have made it a rule to insist on our carcinomatous patients returning for frequent observations extending over a period of five years and have made no charge for subsequent examinations in order to encourage their return, we have been unable to follow definitely to a satisfactory conclusion more than approximately 50 per cent of our cases treated. We do believe that the method outlined above has resulted in a slightly higher percentage of cures than those generally reported.

DISCUSSION

DR. J. A. BEALS (Greenville): I have enjoyed, as I know you have, Dr. Barksdale's concise presentation of this always timely subject.

We at the clinic in Greenville recently turned to the use of more highly filtered radium needles than advocated by the essayist, believing we might avoid much of the escharotic effect locally about the needles. Also, recently we have added 200 KV. x-ray therapy, by which we get a more uniform distribution of radiation throughout the pelvic lymphatic area of metastasis.

However, our cures probably have not been, or will not be, greatly superior to those reported, for one great barrier stands in the way of all who treat this common form of cancer; the patients come to us too late.

Dr. Barksdale touched upon this subject. I would like to take this occasion to elaborate upon this crucial question of cancer education for the public.

Most of our cases come to us too late to be saved by any treatment. This is nearly always because they did not know the profound seriousness of their early symptoms.

Gentleman, I want to say to you that in part, this is your responsibility. You can and do talk to your patients. They ask you questions about cancer, not only of the cervix, but other organs as well. They ask many questions about symptoms, prophylaxis, cures, etc. Such questions are often prompted by their knowledge of friends or relatives, or what they read and hear. There is much that you can tell them, judiciously, ethically, but above all to persuade them to have an examination that will be adequate. Examination with a speculum is imperative for every woman who has a postmenopausal or intermenstrual spotting or bleeding.

There is one other thing you can do to help bring cancer patients to treatment in an earlier stage. I refer to the formation of an active cancer committee of this medical association. It is only through such a committee that national organizations such as the American Society for the Control of Cancer and the American College of Surgeons can co-operate with us in the field of education. It should be part of the function of such a committee to promote and regulate authoritative, legitimate, talks on the subject of cancer to lay organizations,—along the lines emphasized by Dr. Fishbein today—such as women's clubs; parent-teacher associations; the various civic organizations. Such bodies welcome talks by doctors, and every one of them is acutely interested in cancer, how it can be prevented, how it can be suspected in time, how it can be cured. Unless they are informed by us—under supervision by a committee of the association—they will continue in ignorance, or misinformation by charlatans, and so will very many continue to come for treatment when it is too late.

DR. JOHN DARRINGTON (Yazoo City): Dr. Street was on for this discussion and he had to leave and looked around for a young man to take his place, and selected me. Don't blame me, just put the blame on Dr. Street. However, it is a pleasure to discuss this splendid paper by such an eminent man.

The cancer problem is our greatest unsolved problem in medicine, and we are just floundering around trying to cure the belated cases as they come to us. We are doing the best we can, but not enough. The splendid essayist from Kentucky told you just now that one-half of the patients that came to him came too late for surgical relief. We haven't an effective relief for cancer, that is the truth of the matter. We have found that when we could remove the cancer entirely, the patient got well, but we don't see many of them early, and we haven't any excellent, easy method of removing the cancer entirely. What we need as a solution of the cancer problem is to find out the cause, and what is more important to find a preventive measure for cancer. Then we will have arrived at the point where we can do this world the most good. Every theory has been worked to the last degree as to the cause of cancer. Some of the brightest minds in this country are busily engaged in an effort to determine its cause. Unless you visit the large clinics you don't realize the amount of work that is being done, but so far it is not very encouraging.

Back in the old times, when bubonic plague, yellow fever and small pox swept the country, we were in the same position. We did not know the cause and did not know any preventive measures. Diphtheria was one of those diseases also; now we know what causes it, and have a remedy. That is what we want in the cancer problem; some great scientific mind will probably make the discovery, though it sometimes happens that the ordinary doctor will stumble along and find the remedy. Now in the time you are not busy, try to sit down and think out some reasonable theory as to the cause of cancer, and be able to present that to the world, and when you have done that you will have done a wonderful thing for suffering humanity.

DR. WM. T. BLACK (Memphis, Tenn): The invitation to attend your meeting is greatly appreciated. Dr. Barksdale has given a splendid presentation upon a very important subject and one which should be freely discussed. In discussing the etiology of cancer of the cervix no one can add anything new. The author told you about erosions of the cervix being followed by carcinoma. Just why these squamous epithelial cells proliferate and grow wild in some instances and not in others is not understood. However, as Fluhman has suggested, in the attempt to heal these erosions a more embryonic type of cell comes into play and it may be possible that these squamous epithelial cells of embryonic type are the beginning of carcinoma of the cervix. The hormone theory also has advocates, but the etiology of carcinoma of the cervix is still unproven.

Dr. Barksdale has spoken about the histological classification of cancer of the cervix, but it seems to make little difference in permanent cures whether we have the spinal, transitional or spindle cells of Martzloff or the ripe, mid-ripe, or unripe cells of Schottlander, or Broders' classification one, two, three or four. The results are about the same in any of the classifications, for the reason that the more mature cell is slow in its growth, but not very susceptible to radium and x-ray.

The dedifferentiated, or embryonic type of cell is more rapid in its growth and is very susceptible to irradiation. The curability of cancer depends more upon the clinical classification and not the histological classification. The average curability in all cases is about 23 per cent. Necessarily the curability would be very high, if the patients would come while the cancer is confined to the cervix, but most of them come too late for permanent results. Certainly in five years the patient cannot be considered cured. Recently one of the speaker's patients had a recurrence after seven and a half years, and Ward and others have reported a return of cancer after ten years. Therefore, we should be careful in saying that a patient is well of cancer.

Due to strictures of the ureters, intestines and other pathological lesions following irradiation in young women, a few men advocate the surgical removal in the very early cases. However, it is the concensus of opinion that radium and x-ray are the treatments of choice today.

DR. G. S. BRYAN (Amory): It is said "fools rush in where angels fear to tread." I shall not undertake to discuss Dr. Barksdale's very interesting paper. His subject was of course as we know irradiation in cancer of the cervix. I know, personally, but little about irradiation, but my friend Dr. Darrington brought out a feature of the question of cancer that I feel like I might say something about that might be of advantage. The cause and prevention of cancer unquestionably is of more interest to us as doctors than to the public or to the patient. Until we do know the cause of cancer, I think that we are practically beating the air in our attempts to cure it. We must know the cause of it before we know much about the cure or the treatment. Then again, when we hear about 5 year cures, 10 year cures or 20 year cures, the question comes up was the patient ever cured. Was it a cure or was it simply a recession?

There is one question that has been puzzling me, and that is why are the early years of life so free from cancer, and why in each succeeding decade it is becoming more and more likely to show up? Recently I read in an issue of the Cancer Journal of America, about a 35 or 40 page report of some work that had been done by two men, I don't recall their names. They took as most of you surgeons are well aware, a great many rats, hundreds and thousands of rats, and divided them into groups, and they fed those rats on different kinds of food. They smeared them with coal tar, and they kept definite records of the number of rats that became cancerous, and the average time in which the group became cancerous under the use of coal tar. They found that rats fed on certain kinds of food either developed cancer later than the group fed on another class of food, and they found that rats fed on one particular food were immune through a long, long period of time, I have forgotten, but a great many weeks. The food of this group consisted of thymus gland. Rats fed on thumus gland resisted cancerous tendencies. They did not advance the theory, but it came in my mind, might it not to be that the thymus gland of which we know so little has something to do with cancer incidence? It is claimed that the thymus has a pre-natal function. May it not be that the chief function of the thymus gland is to render the unborn child immune to cancer? If this should be proven true, might not a vaccine be developed from thymus that might render those who take it immune throughout life?

DR. BARKSDALE (closing): My friend Dr. Darrington's exhortation to delve more deeply into the cause of cancer reminds me of a small excerpt from Gray's Elegy. It is not impossible that in this group there may come forth some eminent pathologist who may at some time discover the cause of cancer; however, be that as it may the origin of cancer is still unknown to us, although as Dr. Black said many theories have been advanced, but the problem before us is in the absence of definite knowledge as to the causative factors of cancer. What are we going to do about it as a clinical entity? You know a man who operates, who believes in the knife, very reluctantly gives up that form of treatment for something else. He feels that in a measure he has lost caste, and it was only after a long time that I came to the conclusion that radium was doing more for patients than I could do for them in an operative way.

Dr. Black spoke about the operability of these cases, the same thing Dr. Rankin talked to us about. We unquestionably see many cases that we would not dare to touch with the knife, that we administer radium to, and although the mortality remains high in this class of cases, yet so often those patients will come back within a comparatively short period of time, all local evidence of trouble having disappeared, and after following them for a period of years, to our extreme pleasure we find a certain percentage have remained well all of this time. That extends over a period of about 14 years of my experience with radium.

We do not get up and say that radium is a cure-all, or x-ray is a cure-all, or surgery will do what we know it will not do, and in touching on the hormone treatment of cancer that Dr. Black spoke of I will call your attention to the final reports on the Coffey-Humber treatment. There was an influx into California from all parts of the country and they found themselves with about 15000 patients on hand, and they pled with the papers not to give it undue publicity, and they had no authentic knowledge of exactly what to expect. In an analysis of approximately 1000 cases submitted from one of the Los Angeles Hospitals, about 500 of which were treated by the Coffey-Humber method of treatment, they found that the mortality was highest, hemorrhages were greater, and the incidence of complications was very much greater by the so-called hormone treatment than it was by the methods of treatment then and now in vogue.

I do believe taking into consideration the very large number of cases that we could do absolutely nothing for from a surgical standpoint, and that do have some hope of amelioration if not cured by radium, that it is the most distinct advance that we have made in the treatment of cancer within my knowledge as a practitioner of medicine. The more I have to do with radium the more profoundly impressed I am with what it will do, and as Dr. Bryan and others said, while we are still somewhat hopelessly groping, not knowing the exact cause of cancer, yet we are doing something, and Dr. Black's statistics of approximately 22 per cent are about the best we can do. If we see these cases early enough why of course our percentage of cures is going to be extremely high, yet I believe if our cases came to us with a minute malignant growth on the cervix without extension elsewhere, remembering that cancer is always a local condition to start with, before we have had any metastasis whatever, I believe our percentage of cures would be approximately 100 per cent. In the extremely early cases you can almost positively assure the patient, "you have no reason to be alarmed."

Renal Lithiasis*

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With the advent of the cystoscope, the x-ray and intravenous urography the diagnosis of stone in the kidney has been simplified. The treatment of renal lithiasis is by no means simple. The etiology of this condition is still not well understood, but certain factors have been shown to play a part in stone formation. These factors are (1) colloid imbalance, (2) faulty metabolism, (3) infection, (4) stasis, (5) vitamin A deficiency. There are probably others.

To the protective colloid is ascribed the power of holding in solution the various water-insoluble salts which form stones. Urine normally retains in solution a far greater quantity of these salts than could an equal amount of water. If these protective colloids fail to function, the salts normally present in urine precipitate. Precipitation may also occur when the colloids are acting normally if the salts are greatly in excess of the solvent capacity of the colloids. Ord(1) and Shattuck have shown that certain colloids affect the manner of crystallization and that crystals may be deposited as isolated types or coalescent types. The coalescent type is the one present in stone formation. Kyser(2) confirms these observations and in experimental oxylate lithiasis in rabbits noted that when the isolated crystal is the only one present in the urine stone formation does not occur. When the coalescent crystal is present, stone formation may result. It is thought that the normal protective colloid prevents the deposition of coalescent types of crystals. If this is true, it may explain the occurrence of stones as the result of faulty metabolism when a hyperexcretion of certain salts may overwhelm the solvent action of the colloid. Parathyroid tumor with its accompanying hyperexcretion of calcium and phosphorus is an example of this mechanism. The excretion of cystine as a result of the faulty purine metabolism is another. Albright(3) and his associates at the Massachusetts General Hospital have shown a close association between parathyroid tumor and urinary stone formation. Chute(4) reports that in sixteen such cases in the Massachusetts General's series, twelve, or seventy-five per cent, showed urinary calculi. Higgins(5) and Ballin(6) have not noted such an association of stones and hyperparathyroidism. The diagnosis of hyperparathyroidism is confirmed by the presence of high blood calcium and low blood phosphorus levels. Most cases of lithiasis have a normal blood calcium level and on this ground hyperparathyroidism has been eliminated as the cause of stones in such cases. Recently Robbins(7) reported a case showing renal calcification, chronic bone disease and other symptoms of hyperparathyroidism with a consistently normal blood calcium level, Gutman(8) reported twenty-five per cent of the cases in a series of hyperparathyroidism did not show a consistently high blood calcium level. These observations suggest the possibility that a larger percentage of stones may be due to hyperparathyroidism than is commonly thought. Certainly, for the present, all cases with renal calculi should be suspected of having parathyroid disease until proven otherwise. One more word about the protective colloids. The work of Meyer(9) and Newcomb(10) has created some doubt that the protective colloids really exert the protective solvent function attributed to them. I believe the subject is an open one.

INFECTION.—Because of the frequent association of stone and infection it is believed by many that this is the principal cause of stone formation. This is probably true in cases of the so-called secondary stone associated with urea splitting organisms and an alkaline urine. Hager(11) and Magath believe that these urea splitters which cause the formation of the phosphate and carbonate stones occur as secondary invaders to a pre-existing infection. In experimental work inoculation with the organism did not cause stone unless a previous irritation of the bladder was produced. The work of Rosenow(12) in regard to the association between stone formation and infection is of great interest. He isolated an organism from focal infection of the teeth and the tonsils in people suffering with stones, planted these organisms in the tooth socket of devitalized teeth in dogs and was able to produce renal calculi in these dogs. These experiments suggest that stone formation associated with infections may come through the blood stream. I am of the opinion that the role of infection in the stone-forming complex is an important one and that infection should most certainly be eliminated, if possible, in these cases.

Stasis is at present believed to aid other factors in producing stone, but is never the direct cause of stone per se. It is obvious, of course, that where stasis is present, it should be corrected, if possible. Frequently where stasis has been eliminated, an infection will disappear without further treatment.

VITAMIN A DEFICIENCY.—Osborne and Mendel(13), Fugimaki(14), McCarrison(15), Van Leersum(16) and Higgins(17) have produced renal lithiasis in experimental animals by withdrawing vitamin A from the diet. Higgins has stated that in the experimental study constant changes are produced that might be associated with calculus formation. These are keratinization of the epithelium of the genito- urinary tract, urinary infection and alkalinuria. In reviewing these five factors, namely colloid imbalance, faulty metabolism, infection, statsis and vitamin A deficiency, one is impressed with the fact that no one of them can be pointed to as the cause of stone formation. You have all seen these factors present when stone formation did not occur. You have seen phosphaturia, where the urine looked almost like snow and no stones formed. You have seen infection, severe and prolonged, without stone formation. There must be something else. Keyser, in closing the discussion of his paper, on recurrent lithiasis, read before the Urologic Section of the American Medical Association two years ago, said this: "Whatever mechanism is at fault, whether this is impregnation of lime salts in necrobiotic tissue, as in the case of artificial infectious calculosis, whether it is keratinization of the urinary tract epithelium, as in the case of vitamin A deficiency stones, or whether it is crystalline hyperexcretion, in each instance there will be some **pathologic change in the epithelium** that is probably essential for the process. Such a concept may explain in some measure the unilaterality or bilaterality of calculi, or their formation and recurrence in specific sites."

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How may we make use of the knowledge obtained from a study of these stone forming mechanisms? First, by a thorough study of the patient who has a renal stone. This examination should be as complete as the facilities at hand and the financial status of the patient afford. It is ideal to have, in addition to a thorough history and physical examination, a blood chemical analysis for calcium, phosphor and uric acid and where obstruction is suspected, the urea and creatinine. Routine blood and urine analysis, a cystoscopic examination, and in addition to the usual routine examination, a pH. estimation should be made of the separate urines. Particular attention should be paid to the estimation of function and to factors that might produce stasis. A flat plate is made with the catheters in place, pyelogram is made and it is desirable at a later time to make intravenous urographic studies. With the information thus obtained, it is possible to decide whether or not a stone is surgical. I believe stones to be surgical if they are obstructing, if they are producing persistent, severe pain, if hematuria is marked or if complicated by severe infection. The various surgical procedures for the removal of stone in the kidney are fairly well standardized and I shall not discuss them here. One should not overlook the various cystoscopic procedures devised to aid in the passage of stone. Time does not permit a discussion of these procedures here.

If one elects, for any reason, to treat a stone medically, one important fact must be borne in mind and that is that any stone may at any time obstruct. Therefore, it is important that these patients be kept under close observation. From the data obtained at examination, the type of therapy will be outlined. Regardless of the type of diet selected, or the type of case treated, I believe it advisable at this time to include a high vitamin A content. This may be done by administration of the various globules, cod liver oil or by adding to the diet those articles containing a high vitamin A content. If we are dealing with the stone forming mechanism where infection and alkalinuria are present obviously the ketogenic or the high-acid ash diet and, if necessary, ammonium chloride by mouth should be used. It is at times difficult, even with these measures to bring the pH values in the urine down as low as desired and Ewell has suggested a gastric analysis in these cases to determine whether or not the acid content of the stomach is low. If it is low, dilute hydrochloric acid should be prescribed. In cases where a stone is forming is a highly acid urine, obviously solution of these stones is best accomplished, if at all, by providing an alkaline ash diet and some of the various drugs by mouth to alkalinize the urine. Grant(18), some years ago, published a valuable list of diet tables and I recommend them to those of you who are not already familiar with them.

I believe the stones found in association with parathyroid disease should be treated as other stones if they are not found to be surgical; namely with the vitamin A acid ash diet. If sufficient clinical data is found to justify an exploration in search of a parathyroid tumor it should be done.

Rankin and Churchill and Cope have reported each a series of operated cases which tend to prove that there is more than a casual relationship between renal stone formation and parathyroid tumor.

Infection and stasis have been shown to play an important role in augmenting stone formation and every effort should be made to eliminate them. It may be necessary to include frequent cystoscopic treatments to accomplish this purpose and it should be done without hesitation. Neoarsphenamine at times achieves good results in the infections with the staphylococcus.

Where stones have been removed or passed the above outlined procedures may be employed as indicated to prevent recurrence which has an incidence of from 4 to 20 per cent. In every instance possible the stone thus obtained should be subjected to chemical analysis. At times valuable information as to the type of treatment required may be had from this source.

To recapitulate briefly we may say—proper diet and vitamin A; proper pH value in the urine; combat infection and secure good drainage.

One word in regard to the patient who has neither the money nor the intelligence to cooperate in this complicated routine. A diet composed chiefly of bread and meat and greens is the favorite diet of the negro and he is rarely afflicted with stones. Verbum Sapiens.

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DISCUSSIONS

DR. PAUL GAMBLE (Greenville): I think we are to be congratulated on hearing Dr. Sparks' paper, which has thoroughly covered the etiology of stones and takes up the different treatments. Of late we have found that focal infection is one of the causes of stones in the kidney. Metabolism is put down as one of the chief causes. Deficiency in vitamin A is another reason, and some claim that if we increase the vitamin A some of the stones can be dissolved. Hyperthroidism is put down as another cause, and people who have this hyperthroidism are often associated with stones in the kidney. By coincidence I judge that was found out, and by research work several clinics have reported a large percentage of their patients who are suffering with hyperthroidism also have stones. The concentration of urine is also a contributing cause, but I think that infection combined with stasis is one of the chief causes, and this may be brought about by trouble in the ureter or pressure from the outside, such as fibroids in the female or defects in the male. The incidence of stones is about equal in men and women, and stones in children are comparatively rare, though we do have them. About 10 or 15 per cent are bilateral. The diagnosis is made upon the history of the case, the patient complaining of pain and renal colic, hematuria and a patient presenting these symptoms usually shows under x-ray, a shadow in the region of the ureter or the kidney or the bladder. In an examination of the upper urinary tract you should always have a cystoscope, and also a retrograde pyelogram should be made, and intravenous pyelograms also if you do not find what you want with the retrograde. If it is a small stone or near the opening of the ureter into the pelvis, you may often stretch the ureter and it will help. All stones are not visualized by x-ray. The treatment of it is surgical and not medicinal if the stones are large and giving pain and blood and infection; then they should be removed. If the stone is small enough to be passed then by manipulation through the ureter you may dissolve the stone in the pelvis and it may pass out. Any medicinal treatment is by diet and water freely and you often remove the stone if the kidney is not damaged too bad. If it is damaged too much it is better to remove that at once than to go back and do that later. The drainage should always be restored in the ureters. The ureters should be fully open because in removing the stone and leaving the stricture in the ureter, you are to have others to form.

DR. L. B. MOSELEY (Jackson): I wish to thank Dr. Sparks for an excellent and most instructive paper, also Dr. Gamble for his discussion of the same.

My discussion is only to emphasize what Dr. Sparks summarized:

First, proper diet. We know that the great renal calculus areas of the world are China and India, wherein the diet consists, to a great extent, of cereals. The areas where are found the most cases free of stone is that portion where dairy products are in abundance.

(a) Vitamin A. One of the most comprehensive reports that I have read was that of McCarrison, working under the Indian Research Fund. He fed large series of rats the same diet as was eaten by the poorer classes of India. Approximately 21 per cent of these rats developed renal calculi. An addition of vitamin A to the diet caused a dissolution of the stone, leaving only a laminated nucleus.

(b) Ketogenic diet, maintaining a pH 5.4 of the urine, is very helpful in preventing recurrence of stone formation as seemingly, it assists in holding the urinary colloidal balance normal.

Second, infection. It was noted that during the World War a great number of soldiers suffering from simple and compound fractures of the lower extremities showed a marked tendency to renal calculus formation. Two factors were mainly thought to be responsible. Most of these men were immobilized on their back causing poor renal drainage. The factor of more importance was the effect of the calcium metabolism due to the bone injury wherein an increased blood supply to the injured part produced a decalcification, throwing more calcium into the blood stream and eliminating an excess through the kidneys. An excess of phosphates always being in the urine, increased the tendency of the calcium to combine with the phosphates to promote stone formation. Therefore, it behooves us to attempt to maintain the proper acidity of the urine and to avoid the giving of alkalies in such a condition.

DR. SPARKS (closing): I have only one thing to say in regard to medical treatment of stones, and I think it cannot be emphasized too much and that is this—that these patients should be thoroughly studied first with the idea of determining whether or not the medical treatment can be tried. In stones that are obstructing, of course, to try a dietary treatment is to invite destruction of the kidney. I would like to emphasize that one point. I want to thank the doctors for their discussions. I enjoyed it very much.

Coronary Artery Disease*

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Cary, Miss.

The subject of my discussion, "Coronary Artery Disease," as you will see, will be handled more from a practical than scientific viewpoint and as a general practitioner rather than a specialist for I am one of the boys who labors way out and haven't the equipment nor the ability to use all of the scientific paraphernalia of the cardiologist.

This condition covers such an enormous field that for the purpose of this short discussion I am taking up only two phases—coronary sclerosis and coronary thrombosis, mentioning angina pectoris in the discussion of coronary thrombosis as a differential diagnosis.

Coronary sclerosis, or myocardosis as called by some, is a degenerative change in the heart muscle caused by an actual or relative obstruction of blood flow through the coronary system and is usually associated with a general arterio-sclerosis. It occurs usually in middle and old age but may occur earlier in life, more often in males. Infections and endocrine factors affect only in generalized arterio-sclerosis. The most important factors are nerve strain and high tension living especially in those persons who are overweight, emotional, irritable and high strung. We may have considerable sclerosis with few or no symptoms. The early or milder symptoms are a general feeling of inadequacy as though ageing too fast, and easy fatigue which may be brought on as readily by mental as physical effort. There is a feeling of inability to perform usual duties. In the milder cases gastric, vaso-motor or nervous symptoms may predominate. Anorexia and symptoms of gaseous indigestion with negative gastro-intestinal findings are suggestive. There may be vertigo and even syncope from reduced heart action causing a lessened intracranial pressure. Insomnia, especially when it is increased by elevating the head, is especially suggestive.

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When further damage occurs we get the three main symptoms which are: dyspnea, palpitation and sub-sternal discomfort. Shortness of breath is the most important symptom, increasingly so as it grows more pronounced even developing Cheyne-Stokes breathing or cardiac asthma in extreme cases. Palpitation in earlier life may have no cardiac bearing but in middle or later life frequently indicates myocardial trouble especially when following immediately after effort or eating. Substernal discomfort may vary greatly in degree from a tightness or heavy feeling to a severe viselike pain and is practically always associated with effort and causes a definite fear in the sufferer.

In the handling of these cases, especially when found early, management is of much more importance than medication. The patient must be aided in adapting himself to his cardiac reserve from a physical, psychic and social standpoint. Physical adjustment involves especially rest and exercise with great emphasis on the rest. Exercise is of benefit but must be very guarded. I have found it very hard to get these people to understand what is meant by fatigue. When they learn that, they have a chance of working out a routine that will aid them in prolonging their life.

Psychic adjustment has to be made very carefully or we may have a case of neurosis on our hands or a patient who rebels and disregards all signs and symptoms and drives through to an early cardiac death. Moderation in all things and mental serenity are very important and life expectancy will be in proportion to their attainment.

Social adjustment simply means learning when to decline invitations and then being able to relax and rest afterwards. Drugs indicated are those which increase the flow of blood through the coronary arteries. These include the nitrite compounds, caffein and theobromine compounds. Digitalis is indicated if decompensation is present or threatened. Sedatives should be used as needed to procure ample rest; bromides when effective and phenobarbital when needed.

Coronary thrombosis is a sudden occlusion of a branch of the coronary system which causes a loss of blood supply to that portion of heart muscle causing a fatty necrosis which in favorable cases, those who do not die suddenly, is replaced by scar tissue which becomes firm in about eight weeks. There seems to be very little doubt in the minds of heart men that in those patients whose damage is not too great and who escape sudden death that the coronary circulation will be so thoroughly re-established through collateral vessels and other vessels than the coronary tree that the individual will have an apparent complete recovery with many useful years left to him. This condition occurs more frequently in males above fifty years but may occur earlier and in females. It is also seen more in the higher social scale. There is usually an increased blood pressure but you will find a typical case in a person with low blood pressure occasionally. Syphilis is important only when there is an extension from the aorta. Rarely is it found in rheumatic heart disease. Nephritis and diabetes are thought by some to be of importance. Heredity has quite a bearing on the condition. Frequently a father and a son or two brothers are affected. It is thought by some that unquestionable over-indulgences in food, alcohol, tobacco and sexual activity predispose. Probably the stocky, short necked, overweight, hypertensive individual predominates but the spare built individual is not exempt. The majority of coronary individuals are active, athletic, often hunters, fishermen and golfers prone to heavy suppers, especially late night eating. However, it occurs in the sedentary individual. The most outstanding symptom is the long continued severe pain. It is almost unbearable being so intense that the patient fears death, can't lie still, and is very restless, often attempting to get up and walk. It lasts from an hour or two to several days, gradually decreasing in severity after the first few hours. It is apparently independent of exertion, usually coming on during rest, either sitting or lying. It often wakes the individual from sleep. Shock is severe. Nausea and vomiting are frequent and there is often dyspnea. The heart sounds are feeble. The first sound at the apex is scarcely audible. There is often a systolic murmur over the mitral area or body of heart that was not present before. The pain is located behind the lower third of the sternum or in the epigastrium but may be more pronounced in the region of some of the abdominal organs as liver, kidney, lower intestines, etc. Occasionally it extends to either arm or between the shoulders. Pulse is usually weak, thready and fast but usually becomes slow early after attack comes on. At times no pulse is felt. Blood pressure, which is usually high, falls rapidly, the systolic often going below 100 mm. Respiration is shallow and restricted, often there is shortness of breath and air hunger. There may be Cheyne-Stokes breathing. Later there is a leukocytosis with a rise of temperature of one or two degrees. There may also develop a pericardial friction rub and frequently signs of pulmonary edema are found. In irregular cases the pain is abdominal simulating an acute surgical condition of the stomach, intestine, gallbladder, appendix or urinary tract, with fever and leukocytosis or the only symptoms may be dyspnea and syncope. We should always suspect a thrombosis when there is a sudden and unexplained fall in blood pressure or a history of previous mild anginal pains, especially where the patient is of middle age or older and shows any sign of arterio-sclerosis. Often here the electrocardiograph only will make a positive diagnosis possible. The following points will often aid in differentiating between coronary thrombosis and angina pectoris when called in to see a case during a recent attack:

	ANGINA PECTORIS	CORONARY THROMBOSIS
Beginning of attack	During effort	During rest
Seat of pain	Behind middle of sternum	Usually behind lower third of sternum or in epigastrium
Radiation	Left shoulder and down left arm	Frequently absent
Dyspnea	Not present	Marked
Behavior of patient	Quiet	Usually very restless
Duration of attack	Few minutes	Hours to days
Shock	Absent	Present
Vomiting	Rare	Frequent
Pulse	Unchanged or tense	Small, often very rapid
Arhythmia	Rare	Present in small per cent
Temperature	Normal	Elevated
Blood Pressure	Unchanged or rises	Falls very much or no change in mild attacks
Heart sounds	Normal	Soft and weak. Friction sound often. May have gallop rhythm
Signs of congestion	Absent	Often present
Electrocardiogram	Often normal	Usually characteristic
Nitrites	Relieve pain	No effect

In the treatment of thrombosis, REST, absolute and the most complete physical and mental that it is possible to obtain is essential. It frequently is advisable to refrain from undressing the patient until he is fairly comfortable. No company should be allowed, nor should the patient be allowed to talk or attempt any movement. He should, of course, use a urinal and bed pan. No one should be allowed in the room save attendants. During shock external heat should be applied and 5 minim doses of adrenaline hydrochloride, 1-1000, may be given by hypo in extreme shock where blood pressure drops very much below 100 mm. Morphine in quarter grain doses may be repeated as often as necessary to relieve pain and as long as pains continue severe, several days if necessary, as rest is absolutely essential. As pain decreases it may be possible to control with codeine or phenobarbital. The phenobarbital is to be used during the whole rest period to assure freedom from anxiety and restlessness. For the first four or five days liquids only are allowed, sweetened fruit juices, glucose in case of severe nausea. Usually with this diet the bowels may be disregarded but in case of distension small enemas will suffice and if there is too much gas the colon tube may be left in the rectum for a while. After four or five days up to two or three weeks allow mineral oil or milk of magnesia for bowels and only semisolid foods. As a rule after two or three weeks up to eight weeks, with no recurrance of pains, a light diet is allowed but the rest regime is adhered to throughout the whole eight weeks after which the patient will be allowed up in the house and exercises increased from day to day under close supervision. It probably will not be safe to attempt regular work under a year if then. Sedatives should be kept up as long as needed to get rest and quietude. Only in case of threatened congestive failure are heart stimulants allowed. Caffeine sodiobenzoate in 7½ grain doses is given hypodermicly which will usually suffice if begun before failure is too pronounced and when it gives relief it may be kept up as long as necessary in doses as indicated. Frequently, however, caffein will not take care of the failing heart and digitalis will be necessary. Personally I prefer to begin digitalis sufficiently early so that it will not be necessary to give such large doses.

I wish to give abstracts from four of my own cases that illustrate to me the various areas to which pain is referred in coronary thrombosis.

G. W. C., white male, age 67, blacksmith and mechanic. Taken suddenly ill early in morning with very severe pain behind lower part of sternum, dyspnea, nausea, vomiting, shock. Had high pressure for years which dropped from 190/110 to 110/90. For ten days was desperately ill, suffering intensely, requiring heavy doses of morphine to relieve. Had occasional attacks Cheyne-Stokes breathing. Came back very slowly; was only after three months that he was able to be up at all. Was unable to do any work and about one year after his original attack developed nephritis and died a cardio-nephritic death.

J. R., col. male, age 56, rather tall, weighed 160, had never been sick; worked on lumber yard all day feeling fine and on way home a most severe pain struck in region of left kidney. When seen a few minutes later, in great pain, moving constantly, cold, clammy sweats, some nausea and dyspnea. Could put his hand on the exact spot where pain was and would invariably point out same spot. Pulse was weak and slow. B. P. 90/70. Catheterized specimen of urine showed nothing. After 48 hours still had his renal pain but felt some fullness under lower end sternum. Blood pressure came up very gradually and had slow return to normal. Now, one year afterwards, able to do farm work with no ill effect other than tires fairly easily.

Mrs. G. W. G., white female, age 54, rather stout, ran broading house for years, always worked hard. Had never had B. P. over 140, never knew she had a heart until April, 1934. Began slight full feeling substernally, occasionally, usually when resting or lying down. When seen in June found B. P. 96/60, pulse 50, felt completely exhausted, difficult breathing, heart action very feeble. Never had any severe pain during whole illness except she felt like middle of chest was too heavy for her to raise it up in breathing. After eight weeks blood pressure had climbed back to 130/80 and was able to gradually go and do as wished with no real hard work. In June this year had practically the same type of attack and rebelled at resting and about three weeks after attack was lying talking to daughter and had severe pain substernally with severe dyspnea and shock, pulse fast and thready, pressure 160/110. Given morphine for pain and in eight hours pressure had dropped to 86/68 with extreme exhaustion. She was unhesitantingly given digitalis in full doses. She had a rather stormy time for several days but with complete rest for 60 days she is now up all of the time and going about with "easily fatigued" her only complaint.

S. J. W., white male, age 63, plantation manager, short, stout, fat man, had for months occasional pains in epigastrium which when more severe extended behind sternum; often said had indigestion. While playing poker had a very severe pain which caused dyspnea, very difficult breathing, nausea, etc. Pressure usually ran 175/90 but when seen this night was 90/70. Had a very stormy time for ten days, necessitating rather frequent doses of morphine. Developed skippy pulse and signs of failure which necessitated digitalis about fifth day which was kept up as indicated for several weeks. Now after eight months, perfectly comfortable and only complains of tiring rather easily.

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Painful Breast*

M. Q. EWING, M.D.
Amory, Miss.

The breast is both a lactating and a sexual organ and is subject to disease as result of both functions, and is very frequently diseased. How frequently only the physician who examines his patient carefully appreciates. Pain is one evidence of disease, and may appear as actual pain or more frequently as tenderness or soreness elicited by touch or pressure or often elicted by swinging of a large unsupported breast. The breast is never diseased without pain but the amount of notice on this account that the pathology receives will vary with the amount of pain and its frequency and with the type of woman suffering the pain. We all know that many types of women endure pain without mentioning it, while others become frantic at the slightest discomfort.

There are certain periods in a woman's life that normal physiologic engorgements of the breast occur. These are at puberty (at the time of the first menstruation), in the early months of pregnancy, and postpartum before the milk appears. These engorgements are frequently marked enough to cause pain but deserve nothing further than mention since they are physiologic. Then, too, some women experience a fullness or tightness in the breast occurring a few days before the menstrual flow. This, too, seems to be normal and physiologic but cannot be considered so if the feeling of tightness and swelling continues to the point of actual pain, for when actual pain occurs there is some pathology behind it.

To mention some of the statements we have heard and frequently from our female patients: "Doctor! My breasts stay sore all the time." "I can't wear a brassiere because I can't stand anything to touch my breast." "Doctor, I even have to sleep in my brassiere because if I roll over on my side and my breasts hang down long, they pain so bad it wakes me up." "Doctor, my breasts get sore about a week before my period and stay sore until I menstruate and then they get all right." "Doctor! There is something wrong with my breasts. If I get passionate or have intercourse my breasts become so sore I can't bear for my clothing to touch me." "They throb and sharp and sticking pain run through them and go clean out in my axilla and up the side of my neck and out in my arms." "Doctor! They have always been sore, from the first time I menstruated, and when my baby was born they were so sore I could not nurse him and had to wean him." There is not a physician here who could not go on with a still longer list of complaints heard from his women patients about painful breasts. Yet most women and many physicians look upon this as physiologic and incapable of relief and do nothing about it. They simply consider it as one of the ills of nature that women must put up with. The object of this paper is to emphasize that these complaints are evidence of pathology in the breasts or elsewhere and in most cases are capable of relief.

What brings this girl or woman into your office to tell you about her troubles about her breasts? The hope that you can relieve it? Not at all. She does not even hope that you can relieve it, for the probability is that she has endured it long and that many women friends have told her of similar troubles and their hopelessness of relief. She really comes because she is afraid that she has cancer of the breast, apparently the only breast condition women fear. Of course, she may have cancer but the chances are that she does not, and if she does have cancer, it is far advanced. Pain is a very late symptom of cancer of the breast and does not occur until cancer has been present for a long time. The early sign of cancer is a hard painless lump in one breast.

Of course, tumors, abscess, or cancer of the breast may cause pain, but by far the greatest cause of the type of painful breast I have described, probably many times as common as any other cause, is chronic cystic mastitis.

Etiology: The human female is the only mammal that has breast development before pregnancy occurs even though this breast is chiefly fat and the actual milk glands rudimentary. With pregnancy these rudimentary glands mature and after delivery take up their function of milk production. When the baby is weaned these glands undergo involution and become dormant, ceasing to produce secretion and the breast diminishes in size and blood supply. Local disease in the breast such as abscess or tumor or congestion or inflammation of the pelvic organs may prevent the normal involution and leave the breast in a state of chronic engorgement or chronic inflammation. Because the breast is both a lactating and a sexual organ in women there is a far closer association between the breast and the pelvic organs than is true of other mammals, and anything that causes congestion of the pelvic organs (abnormal positions of the uterus, tumors, infections, or sexual excesses, or abnormalities) results in a simultaneous engorgement of the breast. This occurs whether the woman concerned is a virgin of fifteen, a nulliparous married woman, or the mother of ten children. If this congestion of the mammary tissue persists long these glands slowly show chronic inflammatory changes and the glands lining the acini begin to attempt so secrete. But they do not secrete milk. They produce a mucoid secretion consisting of blood serum, desquamated cells from the acini and pus cells. This secretion accumulates and dilates the acini and the smaller ducts leading to the nipple. The stagnation of this mucopurulent material eventually results in bacterial invasion but even before that dilatation of the acini makes them tight and painful and gives the glandular tissue the feel of dried shot or dried peas in the breast. As the inflammation proceeds detritus blocks some smaller ducts preventing escape of the secretion the acini concerned and resulting in changing the acini involved into retention cysts.

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*Read before the Issaquena-Sharkey-Warren Counties Medical Society, Vickburg, August 11, 1936.

This condition may involve both breasts or only a portion of one breast, though usually is it bilateral. This condition has been called by various names. Some authors have called it "involution mastitis" but this will not cover the cases occurring in virgins and nulliparas. Some have called it "senile mastitis" but this will not cover cases in the young. Some authors attempt to confine this term to those cases in which the process has advanced to definite macroscopic cyst formation. The condition is essentially a chronic and progressive condition and its course from the beginning of the process to the stage of multiple retention cyst formation may be a course of twenty or thirty years. Such a definition reminds us of the text-book symptoms of cancer of the stomach of many years past, where the author is really describing the end stages of cancer of the stomach.

These cases are seen in all stages of the disease and the term chronic cystic mastitis seems to fit them better than any other term, since it is a chronic mastitis and since it is or eventually becomes cystic.

Symptomatology: The symptoms are simple and easily carried in mind.

1. *Pain*—The breast is tender to touch and often painful even when not touched. If the patient has not reached the menopause the breast becomes tender preceding the menses and the pain and tenderness diminishes somewhat upon flow.

2. *Chronicity*—The condition is essentially chronic and shows no sign of acute inflammation.

3. *Absence of tumor*—A tumor must be ruled out by careful examination. This is easily done by careful palpation and illumination in the average case, but in the advanced case is by no means so simple. The retention cysts may become large enough and numerous enough to give senation of tumor and only surgical exploration and occasionally only microscopic examination can decide between carcinoma and mastitis. Then too, fibromas, cyst, adeno-fibromas, and carcinoma are frequently co-existant with chronic cystic mastitis.

4. *Discharge*—In the majority of cases the examiner is able to express a greenish or yellowish, muddy, oily material from the nipple regardless of whether the patient is old or virgin or multipara. Usually the patient does not know that such a discharge is present. They usually complain of much pain when the examiner attempts to express the discharge.

TREATMENT

1. *Early Cases:* The condition, while chronic in nature, if it has not existed to the point of definite cyst formation (i.e., in the early stages), is readily amenable to treatment. It does not seem to be a primary condition but is caused by infection or irritation elsewhere. In fact, this condition impresses me as one of secondary inflammation as a result of focal infection. Treatment, therefore, in early cases resolves itself into elimination of the foci of infection, where ever they may be, plus elimination of all pressure on the breast and provision for support for pendulous breasts.

The focus of infection may be anywhere. The author has seen a case clear up after drainage of bilateral chronic abscesses of the antrums. However, in my own experience, pelvic disease in some form has been present in every single case. The lesion most frequently at fault was chronic endocervicitis, with a purulent discharge on microscopic examination. Other pelvic pathology is often behind the endocervicitis. It has been most gratifying to find your patient relieved by simple cauterization of the cervix. In any event my advice would be to look for the cause of chronic mastitis in the pelvis.

2. *Late Cases:* The longer a chronic type of

inflammation has existed the more intractable it becomes. This is true of the breast. When the condition has advanced to definite microscopic cyst formation with proliferation of the epithelium lining the cyst and the acini, we now have the condition that all pathologists call "chronic cystic mastitis." In my opinion this is an end stage of the disease. When this stage is arrived at, elimination of the focus of origin does not relieve the trouble for there are foci now within the breast itself and the definite anatomical changes not themselves inflammatory but brought about by inflammation. It is comparable to the chronic joint infection that has progressed to ankylosis. Bad teeth or tonsils may have originally started the trouble but removing them now will not heal the joint.

The breast now contains palpable solid masses, irregular in contour that seem to merge into the gland. It is usually bilateral at this stage and the auxiliary glands may or may not be enlarged, dependent upon how much bacterial invasion has involved the retained secretions. It is always tender, though pain is usually not as marked as in earlier stages. No form of local or general treatment seems to do any good except surgical removal.

Pathologists are not in agreement about the tendency of chronic cystic mastitis to become malignant, but the majority opinion is that it definitely does have this tendency. Those who deny this tendency account for the frequency of the association of the two conditions as accidental. In any event, all admit that carcinoma frequently occurs in breasts already subject to chronic cystic mastitis and unfortunately when it does so occur, the prognosis is poorer than usual. The reason for this is that because of the presence of the tender cystic masses in the breast, the carcinoma nodule is discovered late.

One then has to choose either to leave these breasts alone and hope that cancer will not develop in them or advise simple breast amputation always remembering that the breast so removed deserves careful pathologic examination to rule out an undiscovered carcinoma. The course the physician adopts will depend upon his viewpoint on this subject. My own course in most cases of advanced cystic mastitis is to advise simple breast amputation.

CONCLUSION

The most common single cause of painful breast is chronic cystic mastitis. In my opinion this is chronic inflammation originating from focal inflammation in the pelvis in most cases. The condition described by many authors as "chronic cystic mastitis" is really the end stage of a chronic progressive inflammation of the breast that at one time was amenable to treatment. Treatment in the early stages consists in elimination of the focus of infection usually in the pelvis and the results will be most gratifying. Treatment in the late stage consists in doing nothing but hope cancer will not occur or else simple breast amputation.

Mississippi State Medical Association

ORGANIZED 1867

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EDITORIALS

Happy New Year

THE VALUE OF MEDICAL ORGANIZATION

In this swiftly advancing era, we have all become organization-minded. On all sides we see people stressing the importance of mobilization for various and sundry causes. Organizations seem to spring up over night for every purpose conceivable. Some of them amuse us; others seem quite absurd and ridiculous; yet many of these organizations really merit our praise for the very worthy work they are accomplishing.

All of this serves to impress us with the present trends toward unification and coordination of work for achieving definite goals—goals that could not be reached through individual effort.

The medical organization is one in which we all may feel just pride. It has survived all others through serving a real social and humanitarian need. As an organization, it is in the front ranks, in that it shares equally among its members all of the arts and technics known to the profession. With its high code of ethics, its discipline, and training, it is destined to grow and continue to be one of the most powerful forces of the universe for the good of the human race.

Organized medicine, such as is represented here, makes possible the carrying out of many important objectives. The constitutions of most medical organizations carry a clause to this effect: "Our purpose shall be to federate and bring into one compact organization the entire medical profession of the various localities embraced by the society."

Not only for scientific advancement and solution of our economic problems, but for the sheer pleasure of knowing other medical men well, our organization ought to be a central part of our lives. We are individuals of a common profession, possessing common ideals and traditions. Our existence and strength depend on our leaders, and it may well be said that in this respect we are going forward. We know that our leadership is wise and intelligent and we believe we are going in the right direction. We are endeavoring to serve also the best interests of the people as well as the medical profession.

The medical organization exists that there may be a clearing house to extend medical knowledge, advance medical science, and to secure the enactment and enforcement of just medical laws. As a well organized body, its members can successfully oppose legislation which is not for the best interests of the profession. Medical organization is, and should continue to be, non-partisan and non-political in purpose. However, this does not preclude active interest on the part of physicians in legislative and governmental affairs. Every physician should feel it a personal duty to interest himself in legislative matters. He should assist in guiding the views of all persons in public office, and especially should officials of medical organizations maintain friendly contact with members of the legislature and other appropriating and law-making bodies. An opportunity should be extended them to discuss the various health problems that arise with members of the medical profession.

"The medical organization shall guard and foster the material interests of its members and protect them against imposition." In spite of the fact that the spirit of the times encouraged the consideration of proposals which provided for the trial of new theories and programs, organized medicine has been successful in its fight to prevent interference with the essentials of medical practice in its relationship to its members.

In organization there is power and the effectiveness of an organization may be measured by the number of members who aid in the promulgation of and support of its policies.

Public health administration owes its greatest stimulus and support to medical organization. In Mississippi, the State Board of Health was created by the Legislature at the request of our State Medical Association, and through the active support and interest of the Association the State Board of Health has grown rapidly and is rendering to the physicians throughout the State a greatly needed and appreciated service. Any attacks on our public health program from any source are promptly repulsed by the majority in organized medicine.

"The aim of the medical organization shall be to elevate the profession that it may become more capable within itself and more useful to the public in the prevention and cure of diseases and in the prolonging of life." This, in my opinion, is one of the highest aims of all and we should be unfailing in our cooperation to bring about the attainment of not only this but all of the objectives for which organized medicine is striving.—Felix J. Underwood, M.D., Jackson,—opening discussion at a meeting of presidents and presidents-elect, of medical associations, of the Southern States, called by Dr. Harvey F. Garrison at the Baltimore meeting of the Southern Medical Association.

FROM OUR PRESIDENT—TO THE MEMBERS OF THE MISSISSIPPI STATE MEDICAL ASSOCIATON

Gentlemen:

Allow me to extend to you my best wishes for a happy and prosperous new year!

It has been my privilege and pleasure to attend meetings of medical societies during the past year. I recently attended the meeting of the Southern Medical Association at Baltimore, Maryland. We had a most profitable and interesting meeting. It was my privilege to especially enjoy a meeting, which I called, of the presidents and presidents-elect of the State Medical Associations in the Southern States. We discussed many phases of medical economics and other problems of vital interest to the medical profession throughout the South.

I visited the pediatrics departments of the principle hospitals in Baltimore and in New York City. It was my privilege to see the high class work that was being done in these hospitals by the leading physicians of our nation. The number of patients, and the many facilities for extensive research in these hospitals and clinics, are, of course, greater than ours. However, I am gratified to say that many physicians of Mississippi are the equal of any and are doing as high class scientific work, as can be found in this or any other country.

I read a statement of some eminent writer a few months ago, in which he stated that it was his opinion, that we would be out of the depression, and I fully believe that we are now definitely out of it. If it takes this to convince you, just look all around you and find all the business houses crowded to the doors. In fact, in most cases, it is difficult to employ sufficient help to take care of the people who are crowding these stores. I found this same condition of business activity through out the entire East. All the hotels, theaters and railroads were crowded almost to standing room.

Now permit me to make this personal appeal to every member of the Mississippi State Medical Association. Since these times are now good, finances are in much better condition. Let each of us consider it our personal duty to go out and get the eligible physicians in our immediate territory to become members of our local societies and the State Medical Association. Just a little personal work in this regard is most effective and in this manner, we can increase our membership even greater than it is at present.

As a final word, allow me to congratulate you and the other members of the Mississippi State Medical Association that we can now boast of having a greater percentage of membership in our State Association than any State in the South, and I know that you will feel gratified to know this. I assure you that it is a great pleasure to me.

With every good wish for the coming new year and assuring you of my desire to give my very best to the medical profession of this State, I am,

Sincerely yours,
HARVEY F. GARRISON, President,
Mississippi State Medical Association
Jackson, Dec. 4.

FROM OUR PRESIDENT-ELECT

To the Presidents of the Medical Societies of Mississippi:

I am exceedingly anxious for an increased membership for our Mississippi State Medical Association for 1937. The best method seems to be for the newly elected presidents of our local and district organizations to appoint a suitable man in each county to secure renewals and new members, soliciting only the eligible physicians and surgeons.

This work should be done at once if they are to get the full benefit of a year's membership.

W. L. LITTLE,
Wesson, President-Elect
Dec. 9, 1936.

STATE HOSPITAL COMMISSION

Forty-one voluntary hospitals of the State had been approved by the State Hospital Commission for the care of charity patients under the provisions of Senate Bill, No. 223, Chapter 178, and House Bill No. 890, Chapter 39, Laws of 1936, on Dec. 12. The five State Charity Hospitals were declared eligible by the same law.

A list of the voluntary hospitals approved, with the Boards of Trustees for each hospital, are given below.

As no patient can be admitted to a hospital for charity care without a certificate of a physician, much of the responsibility for limiting the expenditure of state funds honestly to those really in need lies with the doctors of the state. It is realized that the amount of money available is not enough to take care of all charity patients in Mississippi. That it may be expended where most needed it is necessary to limit hospital admissions to those who cannot otherwise obtain care, and who are suffering from ailments which are in the nature of emergencies.

Several cases have come to the attention of the Commission where patients with uterine fibroids were sent to hospitals for charity care and when informed that the allotments for that month had been expended, asked the usual hospital costs and paid them without question. Such patients are not entitled to charity and the physician should not sign certificates for them. If the hospitals accept the doctor's signature in such cases and care for these patients, others worthy will be deprived of the care intended by the law.

It is realized that the doctor is placed in a difficult position when some influential citizen, perhaps a good patient, asks him to sign a certificate for some tenant or employee, when he knows such tenant has crops and money coming and the employee is receiving regular wages. It means more than taking the easiest way. It means standing for a principle and the best interests of the greatest number in real need. The success or failure of the law lies to large extent with the doctors of Mississippi.

In order to avoid conflicts of accounts and over-running allotments, certain counties have been zoned to specific hospitals. Citizens living in the zoned counties can go only to the hospitals to which they are zoned. Citizens of other counties may go to the hospital of their choice provided it is approved by the State Hospital Commission and money is available. The following counties have been zoned:

Adams County—To Natchez Charity Hospital.

Calhoun County—To Houston Hospital.

Choctaw County—To Oktibbeha Hospital, Starkville.

Hinds County—To Jackson State Charity Hospital.

Jones County—To Laurel State Charity Hospital.

Lafayette County—To Bramlett Hospital and Oxford Hospital, Oxford.

Lauderdale County—To Matty Hersee Hospital, Meridian.

Union County—To Mayes Hospital and New Albany Hospital, New Albany.

Warren County—To Vicksburg State Charity Hospital.

Webster County—To Houston Hospital.

APPROVED HOSPITALS AND TRUSTEES

Aberdeen Hospital, Aberdeen—Mrs. J. S. Hopkins, Aberdeen; Dr. C. B. McCowan, Aberdeen; Mr. J. T. Sanders, Aberdeen.

Baldwyn Hospital, Baldwyn.

Biloxi Hospital, Biloxi.

Bramlett Hospital, Oxford—Mr. H. L. Davis, Sr., Oxford; Miss Kate Skipworth, Oxford; Rev. W. L. Smith, Oxford.

Charleston Hospital, Charleston—Mrs. C. M. Pate, Tutwiler; Mrs. Ned Rice, Charleston; Mrs. John Stephens, Sumner.

Columbia Clinic Hospital, Columbia—Mr. W. C. Flanders, Columbia; Mrs. Mae Ella Griffith, Columbia; Rev. B. L. Southerland, Columbia.

Columbus Hospital, Columbus—Mr. A. J. Fitzsimons, Columbus; Mrs. W. S. Lindamood, Columbus; Rev. E. Nash Boyles, Columbus;

Corinth Hospital, Corinth—Mrs. C. L. Sumners, Corinth; Mrs. L. E. Watson, Corinth; Mrs. Paul T. Jones, Corinth.

Field Memorial Hospital, Centreville—Rev. F. L. McCue, Centreville; Mrs. Robert Lewis, Woodville; Mrs. R. L. Dalton, Centreville.

George C. Hixon Memorial Hospital, Electrict Mills—Mr. E. H. Temple, Electric Mills; Mr. C. H. Thomas, Scooba; Mr. L. P. Spinks, DeKalb.

Gilmore Sanitarium, Amory—Dr. I. P. Burdine, Amory; Mr. S. J. Collier, Amory; Mr. R. R. Baird, Amory.

Greenwood Leflore Hospital, Greenwood—Mrs. J. H. Blanchard, Greenwood; Mr. C. C. Whittington, Greenwood; Mr. R. L. Pillow, Greenwood.

Grenada Hospital, Grenada—Dr. J. S. Sharp, Grenada; Mr. Ralph Semmes, Grenada; Dr. R. A. Clanton, Grenada.

Holmes County Community Hospital, Lexington—Mr. G. W. Crow, Tchula; H. L. Brock, Lexington, Rt. 2; H. W. Watson, Lexington.

Houston Hospital, Houston—Mr. W. A. Wilkinson, Houston; Mr. A. T. Patterson, Calhoun City; Mr. J. M. Guyton, Mantee.

The Ivy Hospital, West Point—Mrs. C. C. Clark, West Point; Mr. R. G. Millard, West Point; Mr. A. D. Simmons, West Point.

Jackson County Hospital, Pascagoula—Mr. M. B. Currebest, Wade; Mr. R. D. Lashmar, Moss Point, Mr. J. R. Watts, Pascagoula.

King's Daughters' Hospital, Brookhaven—Mr. W. D. Lofton, Brookhaven; Mr. R. C. Mise, Brookhaven; Mr. John W. Boone, Brookhaven.

King's Daughters' Hospital, (Colored) Greenville—Mr. H. W. Ivy, Hollandale; Mrs. L. B. Paxton, Greenville; Mr. F. G. Marble, Laurel.

King's Daughters' Hospital, Gulfport—Mr. A. M. Fishburn, Gulfport; Mr. J. F. Board-man, Gulfport; Mrs. R. J. Faucette, Gulfport.

King's Daughters' Hospital, Rosedale—Mrs. Nora K. Kaufman, Rosedale; Mr. Frank C. Paden, Rosedale; Mrs. C. B. Allen, Jr., Rosedale.

King's Daughters' Hospital, Yazoo City—Mr. P. C. Williams, Yazoo City; Mr. Francis H. Hamel, Yazoo City; Mrs. J. W. Woolwine, Yazoo City.

City Hospital, Lumberton—Mr. T. W. Davis, Jr., Purvis; Mr. W. B. Myrick, Lumberton; Mr. S. A. Winborn, Lumberton.

Macon Hospital, Macon—Mr. J. B. Elkins, Macon; Dr. S. F. Hill, Macon; Mr. T. W. Crigler, Sr., Macon.

Magee General Hospital, Magee—Mr. R. L. Everett, Magee; Dr. E. L. Walker, Magee; Mr. J. P. Field, Magee.

Mayes Hospital, New Albany—Dr. E. B. Burns, Ecru; Dr. R. A. Holcombe, Hickory Flat; Mrs. Lula F. Smith, New Albany.

McComb City Hospital, McComb—Mr. P. J. Albright, McComb; Mr. J. O. Emmerick. McComb; Mr. A. H. Jones, McComb.

McComb Infirmary, McComb — Mr. P. J. Abright, McComb; Mr. J. O. Emmerick, McComb; Mr. A. H. Jones, McComb.

McRae Hospital, Corinth—Mrs. C. L. Sumner, Corinth; Mrs. L. E. Watson, Corinth; Mrs. Paul T. Jones, Corinth.

New Albany Hospital and Clinic, New Albany—Dr. E. B. Burns, Ecru; Dr. R. A. Holcombe, Hickory Flat; Mrs. Lula F. Smith, New Albany.

Newton Infirmary, Newton—Mrs. H. B. Bourne, Newton; Dr. W. E. Box, Newton; Mrs. C. E. Sumner, Newton.

Northeast Mississippi Hospital, Booneville—Mr. F. W. Duckworth, Booneville; Mr. W. R. Fulghum, Booneville; Mr. S. S. Stephens, Booneville.

Oktibbeha Hospital, Starkville—Mr. T. M. Montgomery, Starkville; Mr. W. H. Suddeth, Starkville; Mr. F. L. Hogan, Starkville.

Oxford Hospital, Oxford—Mr. H. L. Davis, Sr., Oxford; Miss Kate Skipworth, Oxford; Rev. W. L. Smith, Oxford.

Pontotoc Clinic, Pontotoc—Hon. John Hattox, Pontotoc; Rev. Tom Hodges, Pontotoc; Mr. J. L. Lamar, Ecru.

Popularville Hospital, Poplarville—Mr. J. B. Mayfield, Poplarville; Mr. Dan Johnson, McNeil; Mr. E. B. Williams, Poplarville.

South Mississippi Infirmary, Hattiesburg.

Tupelo Hospital, Tupelo—E. R. Wilson, Tupelo; J. H. Tison, Baldwyn; L. T. Milam, Tupelo.

Tylertown Hospital, Tylertown—Mr. J. M. Hoff, Tylertown; Mr. Ansel Andrews, Tylertown; Mr. Olin Anderson, Tylertown.

Water Valley Hospital, Water Valley—Mr. W. S. Turnage, Water Valley; Dr. L. S. Brown, Water Valley; Dr. H. O. Leonard, Coffeeville.

Winona Infirmary, Winona—Mr. Z. P. Hawkins, Winona; Mr. Shed Hill Hunger, Winona; Mr. J. M. Lamb, Winona.

MISSISSIPPI STATE BOARD OF HEALTH

Dr. Underwood attended a meeting of Southern Medical Association, and Southern Branch of American Public Health Association, meeting jointly in Baltimore, Maryland, Nov. 17-20, 1936. Dr. Underwood appeared on the program for a discussion on "Poliomyelitis," also discussion of "Stillbirths."

Dr. Harry E. Handley, of the Commonwealth Fund, New York, visited Mississippi Nov. 12 and 13 and interviewed applicants for post-graduate fellowships at Tulane University. Dr. Handley visited the State Board of Health offices.

The Commonwealth Fund Committee on Post-graduate Medical Fellowships, after careful consideration of all the applications on file from eligible physicians in Mississippi, is making awards to the thirteen physicians named below:

Aaron Barnes, McCool, Attala County; James M. Hood, Houlka, Chickasaw County; Swinton L. Lane, Hollandale. Washington County; William J. Lusk, Ruleville, Sunflower County; George J. Mancill, Indianola, Sunflower County; John W. Melvin, Camden, Madison County; Junius K. Oates, Laurel, Jones County; Austin D. Chester, Cruger, Holmes County; Samuel D. Newell, Inverness, Sunflower County; Elbert L. Richardson, Louisville, Winston County; Clyde Ruff, Tomnolen, Choctaw County; J. S. Sanders, Leland, Washington County; R. R. Welch, Pelahatchie, Rankin County.

The first seven in the order named are being placed in the group which will begin work at Tulane on Jan. 4 and the last six will be asked to report on Feb. 15, both groups to continue in residence for a period of twelve weeks. Each of these individuals will be expected, as in the past, to undergo a complete physical examination upon reaching New Orleans and if any individual is found to have a physical defect which makes of him a poor risk, he will be asked to withdraw.

The annual meeting of the Mississippi State Nurses' Association was held in Vicksburg, Nov. 5 and 6, Vicksburg Hotel.

Miss Mary D. Osborne, R.N., chairman of the Public Health Section, read a paper "Developments in Public Health Nursing by Aid of Social Security Act." Miss Velma Stewart, R.N., Tupelo, discussed "Disaster Relief." Discussion of Observation Trips was by Miss Elise Smith, R.N., and Miss Margaret Meade, R.N. Mrs. Syd V. Schneidau, R.N., of Brookhaven presided.

Luncheon was served by Woman's Auxiliary to the Issaquena-Sharkey-Warren Counties

Medical Society.

An Institute for Public Health Nurses was held at the Robert E. Lee Hotel, Jackson, Nov. 23 and 24. Dr. Maxwell E. Lapham and Dr. Robert Strong, both of the Division of Medical Education, discussed subjects of interest to public health nurses.

Dr. Felix J. Underwood and Dr. H. C. Ricks visited the Pearl River County Health Department Nov. 27 to be present for the discussion at the conclusion of epidemiological study made by Dr. A. L. Gray. Findings and suggestions were presented to the Pearl River County Health Department at this time.

Dr. W. A. Dearman, who was a member of the Mississippi State Board of Health from 1930 until 1935, died Nov. 4, 1936. Dr. Dearman at one time was president of the State Medical Association. At the time of his death Dr. Dearman was assistant superintendent of the Mississippi State Hospital for the Insane at Whitfield.

A meeting of the Mississippi State Board of Health was held Saturday, Nov. 28, Old Capitol, Jackson.

FELIX J. UNDERWOOD,
Executive Officer.

FOLLOW UP REPLIES

Do you consider yourself cured of the trouble that brought you to the hospital? "Yes."

Do you suffer from any of the same symptoms as when here? "Yes Bladder inflammations."

Have you gained weight? "No" Lost weight? "Yes" How much? "10 pounds."

Do your suffer from any abdominal pain? "Yes ovra and womb."

If so, where is pain located? "Soreness in ovra, womb, and bladder."

Other pains? "Sore in top of stomach and liver."

Do you still menstruate? "Yes often." Is it at regular intervals? "No every 20 or 25 days."

Is there any pain associated with menstruation? "Yes, and menstruation is scant and Pale."

Do you have leukorrhea or vaginal discharge? "Yes" If so, what is its color? "Cream White."

How much? "A small amount daily."

Is there any pain or pulling sensation in region of incision scar? "No."

Are you constipated? "Yes."

FURTHER INFORMATION AS TO PRESENT CONDITION. "When ever gas or action of Bowls Pas the Reigeon of womb a soreness is felt."

"Please send me a statement of the price for a treatment for my condition and I will send for a treatment for my liver kidney Bladder womb and overa troubles Dear Dr. answer soon please"

DIRECTORY AND CALENDAR OF MEDICAL SOCIETIES

Information is not complete. Secretaries of societies are urged to send in full data so that it may be known when the societies of the state meet; also the names of the officers directing their activities this year should be known.

Mississippi State Medical Association: 70th Annual Session and Thirty-fourth Annual Session of the House of Delegates, Meridian, May 11, 12, and 13, 1937.

Adams County Medical Society: A. R. Perry, Natchez, president; F. S. Dixon, Natchez, secretary. Meets third Tuesday, each month; Natchez, 7:30 p. m.

Amite County Medical Society: D. H. Thornhill, Crosby, secretary.

Central Medical Society: E. L. Walker, Magee, president; L. W. Long, Jackson, secretary. Meets first Tuesday, each month, Robert E. Lee Hotel Roof, Jackson, 7:00 p. m., except July and August.

Claiborne County Medical Society: E. P. Jones, Hermanville, president; G. W. Acker, Port Gibson, secretary.

Clarksdale and Six Counties Medical Society: J. E. Powell, Charleston, president; N. C. Knight, Clarksdale, secretary. Meets fourth Wednesday of March and second Wednesday of November, Elks Club, Clarksdale, 2 p. m.

Clark-Wayne Counties Medical Society: W. P. Gray, Waynesboro, president; Albert Hand, Shubuta, secretary.

Coahoma County Medical Society: J. A. Slack, Friars Point, president; N. C. Knight, Clarksdale, secretary. Meets second Wednesday each month, Clarksdale Hospital, Clarksdale, 1:30 p. m.

Delta Medical Society: J. M. Wright, Hernando, president; L. L. Minor, Rt. 4, Memphis, secretary. Meets first Monday of January, April, July, October, Hernando, 10 a. m.

East Mississippi Medical Society: T. G. Cleveland, Meridian, president; Bob A. Cameron, Meridian, secretary. Next meeting, March 11, Meridian.

Franklin County Medical Society: L. Costley, Meadville, secretary.

Hancock County Medical Society: A. P. Smith, Bay St. Louis, secretary.

Homochitto Valley Medical Society: Lucien S. Gaudet, Natchez, president. W. K. Stowers, Natchez, secretary. Meets January, April, July and October, 2 p. m.

Issaquena-Sharkey-Warren Counties Medical Society: G. C. Jarratt, Vicksburg, president; Leon S. Lippincott, Vicksburg, secretary. Meets second Tuesday, each month, Mississippi State Charity Hospital, Vicksburg.

Jackson County Medical Society: W. J. Weatherford, Pascagoula, president; R. G. Lander, Pascagoula, secretary. Meets second Thursday of March, June, September, Pascagoula, 7 p. m.

Jefferson County Medical Society: W. T. Harper, Fayette, secretary.

Newton County Medical Society: V. L. Henton, Decatur, president; Dudley Stennis, Newton, secretary. Next meeting, second Thursday in March, Decatur, 2:30 p. m.

North Mississippi Medical Society: R. G. Grant, Holly Springs, president; A. H. Little, Oxford, secretary.

Northeast Mississippi Thirteen Counties Medical Society: L. L. McDougal, Booneville, president; A. J. Stacy, Tupelo, secretary. Meets third Tuesday, March, June, September and December.

Pike County Medical Society: J. L. Bauer, McComb, president; Elise Rutledge, McComb, secretary. Meets first Thursday, each month, McComb, 6:30 p. m.

Pontotoc County Medical Society: L. O. Carruth, Tupelo, R.F.D., president; O. F. Carr, Pontotoc, secretary. Meets first Tuesday, each month, Pontotoc.

South Mississippi Medical Society: J. P. Culpepper, Hattiesburg, president; Carlton Temple, Hattiesburg, secretary.

Stone County Medical Society: Earl W. Green, Wiggins, secretary. Meets with Harrison-Stone-Hancock Counties Medical Society.

Tate County Medical Society: W. D. Smith, Senatobia, president; J. Sidney Eason, Coldwater, secretary. Meets second Wednesday, each month, Senatobia.

Tri-County Medical Society: D. T. Langston, New Hebron, president; R. B. Zeller, Hazlehurst, secretary. Meets March 9 Copiah-Lincoln Junior College, Wesson; June 8, Walthal Hotel, Tylertown; September 14, Riverside Hotel, Monticello; December 14, Whitworth College, Brookhaven, 12:30 p. m.

Wilkinson County Medical Society: E. M. Butler, Centreville, secretary.

Winona District Medical Society: P. B. Brumby, Lexington, secretary.

MISSISSIPPI HOSPITALS—CALENDAR OF STAFF MEETINGS

MISSISSIPPI STATE HOSPITAL ASS'N.

Eighth Annual Session, Meridian, May 10, 1937.

Anderson Infirmary: Second Friday, each month 6:00 p. m.

Biloxi Hospital: First Friday, each month, 7:30 p. m.

Clarksdale Hospital: Second Wednesday, each month, 1:30 p. m.

George C. Hixon Memorial Hospital: First Monday, each month.

Gilmore Sanitarium, Amory: Third Thursday, 7:30 p. m.

Greenwood-Leflore Hospital: First Thursday, each month, 7:30 p. m.

Houston Hospital: Last Thursday, each month.

Jackson County Hospital: Second Thursday, each month except July and August, 7 p. m.

Jackson Infirmary: Last Tuesday, each month, 4 p. m.

Meridian Sanitarium: Second Thursday, each month, 6:30 p. m.

Mississippi Baptist Hospital: Third Tuesday, each month, 6:30 p. m.

Natchez Sanatorium: Second Tuesday, each month, 7:30 p. m.

Northeast Mississippi Hospital: First Monday, each month, 7:30 p. m.

Rush's Infirmary: Second Thursday, each month, 7 p. m.

South Mississippi Infirmary: Last Thursday, each month, 5 p. m.

U. S. Veterans' Hospital, Gulfport: Every Monday, Tuesday, Wednesday and Thursday, 10:45 a. m.

Vicksburg Hospital: Second Thursday, each month, 7 p. m.

Vicksburg Infirmary: First Wednesday, each month, 7 p. m.

Vicksburg Sanitarium: Tenth or week of tenth each month, 6:30 p. m.

Winona Infirmary: First Thursday, each month, 7:30 p. m.

ADAMS COUNTY MEDICAL SOCIETY

An especially enjoyable meeting of the Adams County Medical Society was made possible Nov. 17 through the hospitality of Dr. and Mrs. L. S. Gaudet, who entertained the members of the Society at their home on Linton Avenue. A delicious dinner was served by Mrs. Gaudet assisted by Mesdames Benoist, Whittington, and Bauer.

A business session was held following the dinner, and in addition to routine matters, the annual election of officers was held. The following were elected: Dr. A. R. Perry, president; Dr. W. K. Stowers, vice-president; Dr. F. S. Dixon, Secretary-Treasurer.

Inasmuch as this was an annual meeting, there were no papers or case reports presented.

F. S. DIXON, Secretary

Natchez, Dec. 4, 1936.

EAST MISSISSIPPI MEDICAL SOCIETY

East Mississippi Medical Society held its annual meeting on the mezzanine floor of the Lamar Hotel, Meridian, Thursday, Dec. 10.

Dr. C. M. Gully, president, presided over the meeting.

Dr. T. G. Cleveland was elected president for 1937 and Dr. Bob A. Cameron secretary for two years. Drs. Gus A. Rush, Ray L. Rhymes and Bob A. Cameron were taken into the membership of the society by unanimous consent.

The following scientific program was rendered:

Present Day Diagnosis and Treatment of Renal Tumors (Lantern Demonstration).—Dr. Eugene B. Vickery, Professor of Urology, Tulane Medical College, New Orleans, La.

Discussion by Drs. J. T. Bailey, I. W. Cooper, T. B. Bourdeaux, and F. G. Riley.

Pediatric Surgery, Report of Five Illustrative Cases.—Dr. Ray L. Rhymes, of Riley's Hospital, Meridian.

Discussion by Drs. M. L. Flynt, T. D. Bourdeaux.

Dinner.—Arranged by Dr. T. G. Cleveland.

Amebiasis.—Dr. Charles F. Craig, Col. Ret. U. S. A., Professor of Tropical Medicine, Tulane Medical College, New Orleans, La.

Discussion by Drs. D. V. Galloway, W. J. Anderson, W. H. Banks, Seale Harris, Jr. and A. C. Bryan.

The Treatment of Cardio-Vascular Syphilis. —Dr. Seale Harris, Jr., of the Seale Harris Clinic, Birmingham, Ala.

Discussion by Drs. J. S. Hickman, D. V. Galloway, A. C. Bryan and Colonel Charles F. Craig.

The next meeting is to be held in Meridian, Thursday, March 11, 1937.

T. L. BENNETT, Secretary.
Meridian, Dec. 11, 1936.

ISSAQUENA-SHARKEY-WARREN COUNTIES MEDICAL SOCIETY

The annual meeting of the Issaquena-Sharkey-Warren Counties Medical Society was held Tuesday, December 8, at Vicksburg, with 30 members and 50 guests present. Following open house at the Elks Club throughout the afternoon, a banquet was served in the Coral Room of the Hotel Vicksburg with addresses and the scientific section afterwards. Dr. T. P. Sparks, Jr., president, presided.

The program:

Invocation.—Dr. C. Estornelle, Vicksburg.

Addresses:

1. Dr. H. W. Kostmayer, New Orleans, President, Louisiana State Medical Society.—A Clinical Talk on Diseases and Treatment of the Cervix Uteri.

2. Dr. Harvey F. Garrison, Jackson, President, Mississippi State Medical Association.

3. Dr. W. L. Little, Wesson, President-Elect Mississippi State Medical Association.

4. Dr. Roy Carl Young, Covington, First Vice-President, Louisiana State Medical Society.

Dr. S. W. Johnson, Vicksburg, introduced the following past presidents of the Mississippi State Medical Association: Dr. P. W. Rowland, Oxford; Dr. D. W. Jones, Jackson; Dr. D. J. Williams, Gulfport; Dr. I. W. Cooper, Meridian; Dr. Willis Walley, Jackson; Dr. F. J. Underwood, Jackson; Dr. Henry Boswell, Sanatorium, Dr. E. C. Parker, Gulfport; Dr. J. R. Hill, Corinth.

Dr. P. W. Rowland spoke for the past presidents.

The following official guests were introduced by the president: Dr. Courtland Gray, Monroe, immediate past president, Louisiana State Medical Society; and Drs. J. P. Wall, Jackson, John B. Howell, Canton; J. G. Gardner, Columbia, W. H. Anderson, Booneville, W. H. Watson, Brandon, J. P. Culpepper, Jr., Hattiesburg, H. L. McKinnon, Hattiesburg, all officers of the Mississippi State Medical Association.

Dr. F. Michael Smith, past president of the society, complimented and introduced the ladies, officers of the Woman's Auxiliary to the Mississippi State Medical Association and Issaquena-Sharkey-Warren Counties Medical Society and invited guests.

Scientific Session:

1. Diverticulitis of the Ileum, With Case Reports and Discussion of the Probably Etiology (Lantern Slides).—Dr. J. M. Mason, Birmingham, Ala.

2. The Diagnosis of Angina Pectoris (Lantern Slides).—Dr. Whitman Rowland, Memphis, Tenn.

3. Surgical Lesions of the Biliary Tract with Special Reference to Recent Studies in Obstructive Jaundice (Lantern Slides and Motion Picture).—Dr. Waltman Walters, Rochester, Minnesota.

Officers of the society for the year of 1937 were elected as follows:

President, Dr. G. C. Jarratt, Vicksburg.

Vice Presidents: Issaquena County—Dr. T. W. Huey, Grace; Sharkey County—Dr. H. B. Goodman, Anguilla; Warren County—Dr. B. B. Martin, Jr., Vicksburg.

Secretary and Treasurer—Dr. Leon S. Lippincott, Vicksburg.

Member of the Board of Censors—Dr. W. K. Purks, Vicksburg.

Member of Committee on Medico-Legal Defense—Dr. F. Michael Smith.

Delegates to the Mississippi State Medical Association: Issaquena County—Dr. W. H. Scudder, Mayersville; Sharkey County—Dr. W. C. Pool, Cary; Warren County—Dr. J. A. K. Birchett, Jr., Vicksburg.

The next meeting of the Society will be held Tuesday, December 12 at 7 p. m.

NEWTON COUNTY MEDICAL SOCIETY

The Newton County Medical Society met at

Decatur, Dec. 9, 1936 at 2:30 p. m. Dr. W. T. Pennington presided. Minutes of the last meeting were read and adopted. Business of the meeting was the election of officers. Dr. V. L. Henton, Decatur, was elected president; Dr. Z. C. Hagan, Union, vice-president; Dr. Dudley Stennis, Newton, secretary and censor; Dr. Roger Mayo Flynt, Newton, delegate to Mississippi State Medical Association; Dr. Pennington, Decatur, alternate. Motion was made and carried that the secretary be instructed to write a letter of condolence to the family of Dr. S. A. Majure, of Hickory, Dr. Hagan and Dr. Pennington appointed on the program committee.

Meeting adjourned to meet the second Thursday in March at 2:30 p. m. at Decatur.

DUDLEY STENNIS,
Secretary

Newton
Dec. 14, 1936.

TALLAHATCHIE COUNTY MEDICAL SOCIETY

The Tallahatchie County Medical Society met in regular monthly meeting Dec. 5 at Sumner, with the following members present. G. L. Biles, Sumner; T. F. Clay, J. G. Backstrum, Tutwiler; G. C. Denson, W. A. Prince, Vance; J. A. Harris, Webb; G. F. Freedland, Glendora; Drs. Moody, Powell and Bardwell, Charleston.

J. W. MOODY

Charleston,
Dec. 12, 1936.

TRI-COUNTY MEDICAL SOCIETY

The annual meeting of the Tri-County Medical Society was held at the King's Daughters' Hospital, Brookhaven, Tuesday, Dec. 8, beginning at 12:30 p. m.

The program as announced by the secretary was as follows:

12:30 p. m.—Dinner.

President's Address—Dr. B. L. Crawford.

Remarks.—Dr. Harvey F. Garrison, President, Mississippi State Medical Association.

Remarks.—Dr. W. L. Little, President-Elect, Mississippi State Medical Association.

Diagnosis and Treatment of Carcinoma of the Uterus and Cervix.—Dr. John T. Sanders, New Orleans.

Officers for 1937 were elected as follows:

President: D. T. Langston, New Hebron.

Vice-Presidents: J. C. McGuire, Hazlehurst, Copiah County; J. W. Wilson, Monticello, Lawrence County; J. A. Atkinson, Brookhaven, Lincoln County; J. J. Pittman, Tylertown, Walthall County.

Secretary: R. B. Zeller, Hazlehurst.

Delegates: R. B. Zeller, Copiah; T. F. Conn, Lawrence; O. N. Arrington, Lincoln; A. B. Harvey, Walthall.

1937 meetings: March 9, Wesson; June 8, Tylertown; Sept. 14, Monticello; Dec. 14, Brookhaven.

R. B. ZELLER, Secretary.

Hazlehurst,
Dec. 12, 1936

ADAMS COUNTY

Dr. and Mrs. J. W. D. Dicks were called to Memphis for the sudden illness of their daughter, Miss Aline Dicks. Following an emergency operation, she is now on the road to recovery.

Dr. and Mrs. Homer A. Whittington and her mother, Mrs. Wood of Brookhaven, went to Baton Rouge for the L. S. U.-Tulane football game.

Members of the doctors' families went to Jackson and New Orleans to see the "Great Waltz."

Drs. Rice and Orendorf have been looking after the practice of our lamented Dr. John Chamberlain.

Dr. L. Wallin is now located in Atlanta, Ga., where he has joined with the Public Health Service. All of his many friends in Natchez wish him success.

Dr. and Mrs. Lucien S. Gaudet, and children and Dr. Elmer L. Gaudet, D. D. S. went to New Orleans on Thanksgiving to be with friends and relatives during the holidays; also to attend the "Great Waltz."

Dr. W. K. Stowers joined some friends in Louisiana on an exciting and most enjoyable deer hunt during last week.

LUCIEN S. GAUDET,
County Editor

Natchez,
Dec. 4, 1936.

DESOTO COUNTY

The DeSoto County Medical Society will meet Jan. 4 for the election of officers and other important business; every physician in the county is expected to be present.

Miss Ruth Hughes and child, of Oxford, have been visiting her parents, Dr. and Mrs. J. A. Rhodes, Horn Lake.

Dr. Charles Whitley Emerson, Hernando, has returned from New Orleans where he completed a post-graduate course at Tulane University.

As Rotarians some of the physicians in these parts have been very active in securing funds for the Crippled Children's Hospital in Memphis. Needless to say that this is laudable.

"An American Doctor's Odyssey" by Victor Heisser, M.D., is first and "Man the Unknown" by Alexis Carrel is third in the non-fiction "What America is Reading."

Preparations are being made for the meeting in early February of the Mid-South Medical Assembly in Memphis. Program and attendance are expected to surpass any previous meeting.

Dr. J. M. Wright, Hernando, president of our local medical organization, urges every member to be present at our next meeting.

When these lines are read Christmas of 1936 will be history and we will be well into a New Year. We wish for all the very best.

The esteemed editor of *The Mississippi Doctor,* is making every effort to give us a worthwhile Journal; let all lend a hand.

L. L. MINOR,
County Editor

Rt. 4,
Memphis, Tenn.
Dec. 10, 1936.

HUMPHREYS COUNTY

Dr. and Mrs. W. S. Taylor visited relatives in Carrollton last week.

Dr. and Mrs. J. W. Barkley and family and Dr. and Mrs. T. J. Barkley and family spent Thanksgiving with their parents in Cotton Plant.

The recent visit of Dr. and Mrs. Eckford Wadlington and son, Flora, was enjoyed by Dr. and Mrs. J. A. Wadlington.

Friends of Dr. J. R. Jackson are glad to learn that he is able to resume practice following his convalescence from an appendectomy.

We are pleased to see Dr. G. M. Barnes well again following a severe attack of influenza. Dr. Barnes demonstrated that it does not pay to take a bath on the third day after going to bed (he was sick for fully a week before he quit going), that it does not pay to eat liver on the fourth day, and that one can get well at home. He also proved that even with some poor attention from his physician a doctor can be a good patient.

We regret to report that Dr. J. C. Higdon is still at the Baptist Hospital, Memphis. No one could be missed as much here as is Dr. Joe.

Spencer Barnes, student at Oxford, spent Thanksgiving with his parents, Dr. and Mrs. G. M. Barnes.

Mr. and Mrs. Edward Jones and son, Jimmie, of Aberdeen and Oakland, spent last Sunday with their uncle and aunt, Dr. and Mrs. J. W. Jackson. Miss Bessie Mae Jollison, of Aberdeen, accompanied them, and is remaining several weeks for treatment.

Dr. G. S. Bryan and daughter, Mrs. Milton Branton, of Houston, Texas, have returned from the bedside of their brother and uncle, Dr. W. W. Bryan, Hamilton. We are glad to know that the latter has improved much recently.

J. W. JACKSON,
County Editor

Belzoni,
Dec. 4, 1936.

LEAKE COUNTY

Replying to your recent request to furnish some news items or report from the Leake County family of medicine, I will begin with an apology for what may appear to you as gross neglect. Such has not been the writer's disposition or intent.

In the first place little has transpired during the year 1936 so far as our county society goes, and secondly it seems that more has come up to occupy, divert and even distress your reporter's mind that in any one year of his life. Acquiring a lot, building a home, furnishing same, the arrival of a first and only son, Harry Huelette Puryear, all in one year have called into play all his mental as well as financial resources. We are happy to say, however, that all these were done satisfactorily and the son is progressing nicely. Thanks to the Baptist Hospital, Dr. Carter O'Ferrell and Drs. Garrison and Garrison, of Jackson.

The Leake County Society has not been functioning much here of late although a number of its members have been faithful in attendance at the meetings of the State and Central societies. Our president, Dr. W. S. Martin, has been considerably under the weather for some time. We have high hopes of getting a county hospital at Carthage. The board of Supervisors has offered us the abandoned Agricultural High School Building provided we can raise the wherewithal to overhaul and equip it. The building is substantially constructed and ideally located for a hospital. If the plan goes through, Carthage will be a desirable location for a man who can and desires to do surgery.

We have a drive on now to repeat our last year's feat of making the Leake County doctors 100 per cent in paid up membership in the Central Medical Society. Recently Dr. James Barnett was elected vice-president of the Central Society from this county. Delegate to the State Association is Dr. B. R. Wilson with the writer on the Committee of Public Health and Legislation.

Leake County still has eighteen active physicians, Dr. C. F. Lacy, Thomastown, having come in to fill the vacancy created by the death of Dr. W. A. Gowan.

Assuring you as to the local doctors' attitude toward the hospital zoning act, so far we have not been zoned so we are not prepared with any experience. However, the general oponion of the profession is not much in sympathy with the idea. Situated about half way between Matty Hersee at Meridian and the Jackson Charity at Jackson we have found it very satisfactory to send our charity patients to one or the other of these hospitals. We have little hope that small hospitals located in rural counties can render the service we now get at the state hospitals. Personally we think another well-equipped state hospital located somewhere in North Mississippi would come nearer meeting the demands.

H. H. PURYEAR,
Carthage, County Editor
Dec. 7, 1936.

LEFLORE COUNTY

Dr. Thad Montgomery, Memphis, visited his sister, Mrs. I. L. Jones, in Greenwood, Nov. 5.

Dr. and Mrs. Robert Dickins, Monticello, Ark. visited in the home of their parents, Dr. and Mrs. W. B. Dickins, Greenwood, on Armistice Day.

Drs. R. B. Yates and J. C. Adams attended the football game at Clarksdale, between the Clarksdale and Greenwood schools, Nov. 13.

Dr. and Mrs. W. E. Denman attended a family reunion of the Denman family at Charleston, Nov. 14.

Dr. J. C. Pegues, attended the meeting of the Southern Medical Association at Baltimore, Md., Nov. 16 to 20.

Drs. J. C. Adams, J. A. Crawford, G. Y. Gillespie, Jr., and L. B. Otken went to Starkville to the Ole Miss-State game, Saturday, Nov. 21.

Dr. Tate Carl, Memphis, visited in the home of his parents, Nov. 22.

Mrs. Pope McCorkle, and sons, Pope, Jr., and Bill, spent Thanksgiving in Greenwood with their parents and grandparents, Dr. and Mrs. W. B. Dickins. Mr. and Mrs. John Dickins, and daughter of Leland, came over for Sunday. Miss Marion Dickins spent Thanksgiving in New Orleans with her brother, Dr. Fred Sandifer, Jr.

Dr. and Mrs. T. G. Hughes, Clarksdale, spent Sunday, Nov. 29, in Greenwood.

Dr. and Mrs. E. R. Meek, Glendora, announce the birth of a baby girl, Nov. 26, Greenwood Leflore Hospital.

Dr. and Mrs. W. G. Tabb, and sons, Granville and Harold, attended a family reunion of the Tabb family at Walthall, Sunday, Nov. 30.

W. B. DICKINS,
Greenwood, County Editor
Dec. 4, 1936.

LINCOLN COUNTY

Dr. and Mrs. J. R. Markette, Brookhaven, returned a few days ago from a nice trip to Mexico City.

Dr. O. N. Arrington and H. R. Fairfax, Brookhaven, attended the recent meeting of the Southern Medical Association in Baltimore, Md.

The new hospitalization arrangement for charity cases is O. K.

H. R. FAIRFAX
Brookhaven, Dec. 3, 1936.

SUNFLOWER COUNTY

Dr. and Mrs. R. H. Bostwick, Jr., are the parents of a fine baby girl, Mary Ann Bostwick, born Nov. 10 in the King's Daughters' Hospital in Greenville.

Dr. U. S. Wesson reports an enjoyable time during his week's trip to Baltimore and other points of interest.

Among the thirteen Mississippi physicians selected by officials of the Commonwealth Fund to receive post-graduate fellowships to the Tulane School of Medicine are three Sunflower County physicians, Drs. W. J. Lusk, Ruleville; G. J. Mancill, Indianola; S. D. Newell, Inverness.

It is with much regret that we report the death of Dr. B. F. McNeal, of Moorhead, on Oct. 16.

Dr. D. T. Talmadge, formerly of Jackson, is now practicing in Moorhead.

Dr. W. E. Wiggins, of the Parchman Hospital is recovering after a short illness.

H. B. COTTRELL,
Indianola, County Editor
Dec. 4, 1936

TALLAHATCHIE COUNTY

Dr. C. M. Meek, Glendora, is daddy for the first time. It is a girl and was born on Thanksgiving. The doctor's excuse for not attending the county medical society meeting was, "I have married a wife and we have a baby girl at our house."

The writer was on a week's camp hunt in Issaquena County during the Thanksgiving season. We were camping in a few miles north of where Mr. Cannon lost his way. I got a bit turned around a couple of times but made it out okeh. It makes cold chills run over one to think of it since Mr. Cannon came to such a tragic end.

Dr. and Mrs. J. E. Powell, his son Charlie Powell, Mrs. Moody and I attended the Ole Miss-Tennessee football game in Memphis, Dec. 5th.

Mrs. Moody, Mrs. Ned Rice and several others attended a meeting of the W. M. S. in Greenwood last Thursday.

The duck hunting season is here, also the weather. Drs. Powell, Bardwell and I are all fond of the sport, but do not do much damage to the ducks.

Dr. and Mrs. Powell expect their daughter who resides in Memphis to spend the holidays in their home.

Wishing the staff of the Mississippi Doctor a Merry Xmas.

J. W. MOODY,
Charleston, County Editor
Dec. 12, 1936.

WARREN COUNTY

The Tri-Parish Medical Society at its November meeting in Tallulah, La., had as guest speaker Dr. R. A. Street, Jr., of Vicksburg. We are advised that Dr. Street discussed the "Toxemias of Pregnancy."

There was unusual static in our radio two weeks ago. The reception was very poor while trying to get the football game at Memphis when Ole Miss held the Volunteers of Tennessee to a tie. We could not ferret the trouble until we recognized the voice of Dr. Guy Jarratt who was up there emitting so much magnetism that the radios balked.

The many friends of Mrs. Leon S. Lippincott extend sincere sympathy to her in the loss of her mother, Mrs. James W. Holcomb. Mrs. Holcomb resided at the home of Dr. and Mrs. Lippincott. Interment was made at the old home in Bronson, Michigan.

The annual banquet of the Issaquena-Sharkey-Warren Counties Medical Society was held Dec. 8. The attendance was exceedingly good. About one hundred doctors were in attendance, with a few doctors from Louisiana gladdening us with their presence. The auxiliary ladies had at their table as guests to them, and also guests to the doctors' banquet, Mrs. King. of Covington, La.; and Mrs. Kostmayer, of New Orleans, La. Many friends of our yesterday-years were present, notably Drs. Rowland, Hill, Parker, Boswell, Walley, Cooper, D. J. Williams, Anderson, Wall, and many others. "We count our time by times we have met. These are our yesterdays, tomorrows, noons and nights."

Dr. Nathan Lewis and Dr. Guy P. Sanderson leave about Dec. 20 for the national meeting to be held in Washington, D. C. to discuss and study the national problem of syphilis, especially its treatment and control. The conference is called by Dr. Parran, Surgeon General of U. S. P. H. Service.

We realize that with the penning of these lines the old year is fast slipping away and perhaps when you read this the new year will have well begun. The old year has been good to the doctors of our city and county. Thus far the white winged reaper has withheld his scythe. Some misfortunes have visited many of us but no deaths have come to any of our doctors or members of their immediate family, for which we are most grateful. In bidding the old year adieu and in welcoming the new we are reminded of Ovid's words describing the passing of time when he said, "Time glides by, and we grow old with the silent years; and the days flee away with no restraining curb" and although no man has ever found the fates so much his friend that he can claim destined to him another day, nevertheless we can *wish* for all many happy tomorrows.

H. T. IMS,
County Editor

Vicksburg,
Dec. 14, 1936.

WINSTON COUNTY

Dr. E. L. Richardson, H. E. Hunt and Grady Clark, of Louisville, were in the Yazoo Delta deer hunting last week, and killed a large buck. In order to confirm their report they sent a supply to the editor of the Winston County Journal, Mr. W. C. Hight, hence we must accept it as true.

Dr. S. W. Pearson with a party went to Memphis last week on business.

The doctors of Winston are hoping to be present at the East Mississippi Medical Society meeting the 10th of this month, but we are so blocked by detours that unless roads are dry, it will be almost impossible to go.

Dr. E. Lovorn was in the city this week on business.

Dr. T. C. Suttle was in the city on business, and states collections fair. We really feel that doctors are usually the last considered on pay day.

M. L. MONTGOMERY,
County Editor.

Louisville,
Dec. 8, 1936.

HOSPITAL STAFF TRANSACTIONS

CHARLESTON HOSPITAL STAFF MEETING

The staff of the Charleston Hospital met in regular monthly session in connection with the county medical society. Many cases of interest were discussed by the 10 members present. All of the members are active supporters of the hospital.

J. W. MOODY

Charleston
Dec. 12, 1936.

VICKSBURG SANITARIUM STAFF MEETING

A regular monthly meeting of the Vicksburg Sanitarium was held Thursday, December 10, and after a supper served at 6:30 p. m., was called to order by the president, Dr. J. A. K. Birchett, Jr., with thirteen members and one guest present. The program included:

Reports From Records Department and Analysis of the Work of the Hospital.

Report of Vital Statistics.—Dr. F. Michael Smith, Director, Warren County Health Department.

SPECIAL CASE REPORTS:

1. Carcinoma of the Fundus Uteri, of the Cervix Uteri, and of the Vagina, Occurring

Simultaneously, and Apparently Separate Lesions.—Dr. A. Street.

2. Acute Bilateral Pyelitis Due to the Paratyphoid B. Bacillus.—Dr. J. A. K. Birchett, Jr.

3. Mesenteric Lymphadenitis.—Dr. L. J. Clark.

4. Stricture of Rectum Due to Lymphogranuloma Inguinale (two cases).—Dr. R. A. Street, Jr.

Demonstration of Selected Radiographic Studies: Osteomyelitis of the Skull; Arthritis of Hip Joint, Hip Joint for Discussion; Bronchiectasis; Pulmonary Tuberculosis (2 cases); Duodenal Ulcer (3 cases); Redundant Sigmoid; Hydronephrosis; Ureteral Calculi (2 cases).

Three-Minute Reports of the Literature of the Month:

Pulmonary Embolism as a Cause of Post-Operative Death.—Dr. Leon S. Lippincott.

The Effect of Treatment on the Nervous Symptoms of Pernicious Ademia.—Dr. L. J. Clark.

Officers for the year of 1937 were elected as follows:

President, Dr. G. M. Street.
Vice-President, Dr. L. J. Clark.
Secretary, Dr. Leon S. Lippincott.

The next meeting of the staff will be held Monday, January 11, 1936.

ABSTRACT.—ADENO-CARCINOMA OF FUNDUS OF UTERUS, SQUAMOUS CELL CARCINOMA OF CERVIX, AND SQUAMOUS CELL CARCINOMA OF VAGINA OCCURRING SIMULTANEOUSLY. — A. STREET, M.D.

Patient.—Colored, female, age 48, married, admitted to Sanitarium Aug. 24, 1936.

Present Illness.—Vaginal discharge present and increasing for 3 months; pain in lower vaginal region and a sore lump in vagina; no bleeding. Occasional bladder frequency and tenesmus. Has lost 15 pounds in weight in past three months but general health has seemed good.

Previous History.—Has had typhoid and smallpox. Three living children; one miscarriage. Menopause 5 years ago.

Family History.—Father dead, cause unknown. Mother died at age 70; cardiac; apoplexy. Four brothers living and well; one sister living and well.

Physical Examination.—Looks older than 48 years and probably is. Well developed and nourished. Blood pressure 180/100. General examination not remarkable.

Local Examination.—Indurated, ulcerating mass, 2x1 inches, involving lower right wall of vagina; posterior margin is close to rectum. Vaginal wall between upper margin of growth and cervix appears and feels normal. Cervix shows moderate hypertrophy; a ½ inch circle of ulceration around external os. By bimanual examination under anesthesia, fundus forward; full normal in size; shape and consistency apparently normal. Structures freely movable. No pelvic masses. No evidence of broad ligament or parametrial involvement. Tissue for biopsy taken from mass in vagina, from cervix, and by curet from fundus of uterus.

Surgical Pathology (Dr. Lippincott).—Vaginal Lesion: squamous cell carcinoma (grade IV). Many mitotic figures; ulceration; acute purulent inflammatory; hemorrhagic exudate; granular necrosis.

Cervix: squamous cell carcinoma (grade IV) and adeno-carcinoma (grade III). Numerous mitotic figures. Much chronic and acute inflammatory; fibrosis.

Curettings from Fundus of Uterus: adenocarcinoma (grade IV). Numerous mitotic figures; infiltrating the wall. Areas of squamous cells, mostly well differentiated. Much chronic, slight acute inflammatory. Some veins show thrombosis; one thrombus includes few squamous cells.

Clinical Laboratory.—Blood Wassermann, Kahn, Kline and Young, and Eagle flocculation tests, negative. Urine showed nothing abnormal. Blood showed no remarkable anemia.

Treatment.—Careful irradiation with radium using various methods of applications; total dosage of 8600 milligram hours during a period of three months. At present vagina and cervix are healed and there is no evidence of growth.

Remarks.—Prognosis is bad. Clinical examination seems to show the lesions in the vagina and cervix to be entirely separate. Dr. Lippincott states that, judging from the microscopic appearance, the growth in the fundus appears to be a separate and distinct lesion from that of the cervix. It is not known which of these carcinomatous growths occurred first. The patient seems to have three independent cancerous lesions—of the uterus, the cervix, and the vagina.

ABSTRACT. — INFLAMMATORY STRICTURE OF THE RECTUM DUE TO LYMPHOGRANULOMA INGUINALE (TWO CASES).—R. A. STREET, JR., M.D.

—CASE I—

Patient.—Colored, female, age 33, admitted to Sanitarium Oct. 3, complaining of difficulty in bowel movements, with some blood in the stools.

Present Illness.—Began about three months ago, with increasing difficulty in movement of bowels, associated with much tenesmus; soon noted blood and pus in stools; considerable nausea, vomiting and fever, with gradual loss of weight and strength.

Physical Examination.—Temp. 100° F.; pulse, 110; blood pressure 100/60; resp. 18. Acutely ill; evidence of much loss of weight and dehydration. Stricture just inside the rectal sphincter which barely admits one finger; also a small lesion on the outside of the anus on its anterior upper surface, which is hard and indurated and about the size of a pea.

Procedure.—Admitted, given 1,000 c.c. of glucose soluton in the vein daily, and put on liquid diet. Oct. 5, under gas anaesthesia, the stricture was dilated to three fingers and a section of tissue was removed for diagnosis. Pathological report showed acute and chronic inflammatory, with no evidence of tuberculosis. Oct. 4, a Frei test was done. Oct. 6, 48 hours later, the area on the arm showed a red and indurated patch where the antigen had been injected intracutaneously, about 1-8 inch in diameter. Oct. 8, 72 hours after the injection of antigen, the area was about 1-4 inch in diameter and still red and indurated. It continued to show a marked reaction until her discharge Oct. 15, at which time she had improved and was able to take nourishment much better. Since this admission to hospital, patient has been seen once in the clinic and the stricture was dilated again. Her condition at present is very unsatisfactory. She is barely managing to take enough nourishment at home to keep her alive, and has spells of nausea and vomiting and difficult bowel movement. She has been advised to return for another dilatation of the stricture.

—CASE II—

Patient.—Colored, female, age 31, admitted to Sanitarium Sept. 12, 1936, complaining of fever, malaise, low abdominal pain, and difficulty in having bowel movements, with much tenesmus, and also passage of purulent and bloody material from bowels.

Present Illness.—Began about one month previous to admission, and, during this time, she has lost much weight and strength and the difficulty with bowel movements has become more marked, with considerable tenesmus at times.

Physical Examination. — Temp. 102° F.; pulse 100; blood pressure 110/70; resp. 20. Acutely ill, with evidence of dehydration and emaciation. Pelvic examination showed a large mass between the vagina and rectum, midway between the cervix and the vaginal outlet, which felt rather cystic and not particularly tender. Much tenderness was noted in both adnexa and indefinite masses were made out in these regions. The cervix itself was not remarkable. Rectal and vaginal examinations showed marked stricture about three centimeters above the anus and it was impossible to push the little finger through this stricture. Much purulent material flowed from the rectum when the finger was removed.

Procedure.—Admitted and given 1,000 c.c. of 5 per cent glucose solution daily. The next day was taken to surgery for dilatation of the stricture under gas anaesthesia and a section of tissue was removed for biopsy. About 10 c.c. of straw-colored fluid was aspirated from the cystic area. Pathological report showed acute and chronic inflammatory. Frei antigen gave marked reaction in all readings, the area becoming red and swollen almost immediately after the antigen was administered and about 3-8 inch in diameter on the 48 hour reading, and remaining during the entire stay of the patient. Discharged on Sept. 23, feeling very much improved and able to have bowel movements more normally, with much less pain and tenesmus. Advised to return to the clinic, but has not been seen.

Comment.—It is interesting to note that in both of these cases there were positive Wassermann reactions and x-ray examinations of the chest did not show any evidence of tuberculosis infection. Many times in the past, I feel that inflammatory stricture of the rectum has been wrongly attributed to syphilis, when, in reality, it was due to lymphogranulomatosis. Dr. Von Hamm, in a recent article on the subject, reveals the hopelessness that is attached to these cases when they have reached the stage of having inflammatory rectal strictures, and, unfortunately, the outlook in both of these cases is very poor. The dilatation of the strictures is merely a temporary measure to help the patient obtain as much relief as possible.

HONOR ROLL

The following have contributed to the State Association section of our journal this month:

County Editors: Adams, L. S. Gaudet; DeSoto, L. L. Minor; Humphreys, J. W. Jackson; Leake, H. H. Puryear; Leflore, W. B. Dickins; Lincoln, H. R. Fairfax; Sunflower, H. B. Cottrell; Tallahatchie, J. W. Moody; Warren, H. T. Ims; Winston, M. L. Montgomery.—10.

Societies: Adams County, F. S. Dixon; East Mississippi, T. L. Bennett; Issaquena-Sharkey-Warren Counties; Newton County, Dudley Stennis; Tallahatchie County, J. W. Moody; Tri-County, R. B. Zeller.—6.

Hospitals:Charleston Hospital, J. W. Moody; Vicksburg Sanitarium.—2.

Others: Harvey F. Garrison, W. L. Little, F. J. Underwood.—3.

Grand Total.—21.

Thank you and Happy New Year!

WOMAN'S AUXILIARY
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December 15, the ladies of the Northeast Mississippi Thirteen County Medical Auxiliary gathered at the country club in Tupelo, to be guests at a beautifully planned luncheon given the members of the Tri-County Auxiliary, of which Mrs. R. W. Carruth, Tupelo, is president. The honor guest for the day was our state president, Mrs. Adna Wilde, of Jackson. Other noted guests who attended were Mrs. O. S. Warr, of Memphis, Mrs. H. C. Ricks, of Jackson, and Mrs. H. N. Mayes, of New Albany. Dr. Felix J. Underwood, of Jackson, was present for a short time to bring greetings from the doctors.

Mrs. Carruth and the retiring president of the Thirteen-County Auxiliary, Mrs. W. H. Cleveland, of Tupelo, presided. In response to an extremely well given welcome by Mrs. V. C. Philpot, of Houston, Mrs. Wilde and the other special guests expressed their pleasure in being present. The state president added words of commendation and encouragement to the auxiliaries, both of which were organized a year ago. Music and vocal numbers added grace to the luncheon.

At the close of the luncheon, reports were heard separately from the officers of the two auxiliaries. The new officers of the Thirteen-County Auxiliary were presented: Mrs. B. D. Hansel, of Okolona, president, who took the gavel from Mrs. Cleveland with earnest determination to carry on with the same ardor with which the group had been organized and helped to its present growth. She received the hearty support of everyone present. Mrs. W. H. Cleveland, whose services the auxiliary was loath to relinquish in toto was made vice-president; and Mrs. W. H. Anderson, Booneville, secretary-treasurer.

The name of the Tri-County Auxiliary was changed to Four-County Auxiliary with the admission of the ladies of Prentiss County to its membership. Mrs. Wilde was very helpful in suggesting matters of affiliation and procedure as well as straightening out other difficulties.

At the banquet that evening at the Tupelo Hotel, the auxiliary guests of honor were presented as were the visiting doctors at the medical meeting.

DOCTOR'S WIVES ENJOYED MONTHLY LUNCHEON TUESDAY

If its first luncheon of the new year sets the standard for future entertainments, the Woman's Auxiliary to the Central Medical Society will enjoy unusually beautiful affairs in 1937.

The Auxiliary, composed of wives of doctors who belong to the Central Medical society, met yesterday at noon at the Edward's hotel for its regular monthly luncheon. Mrs. Temple Ainsworth, president, presided.

The long table held a huge centerpiece of strikingly arranged red roses, red carnations, gladioli and calla lilies. Cream candles in silver holders lighted the table.

Mrs. Ainsworth was assisted in receiving members and guests by three hostesses, Mrs. Frank Hagaman, Mrs. I. C. Huggins, and Mrs. A. G. Wilde. Others present were: Mesdames Lauch Hughes, Fred Hollowell, J. A. Milne, Felix Underwood, L. W. Long, F. L. Van Alstine, J. P. Wall, T. E. Wilson, John Walker, O. F. Carr, J. W. Lipscomb, J. W. Dugger, and two guests, Mrs. Jack Van Alstine of Canada and Mrs. E. P. Russell of Jackson.

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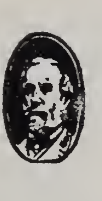

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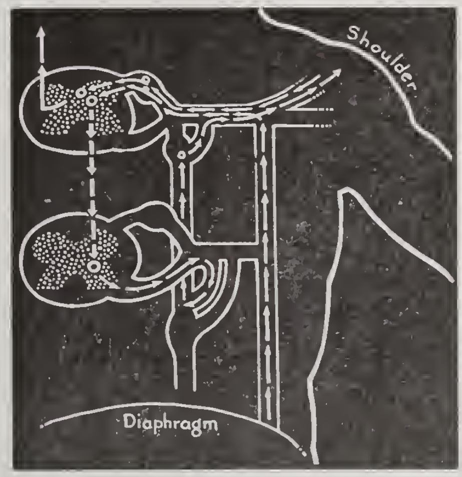

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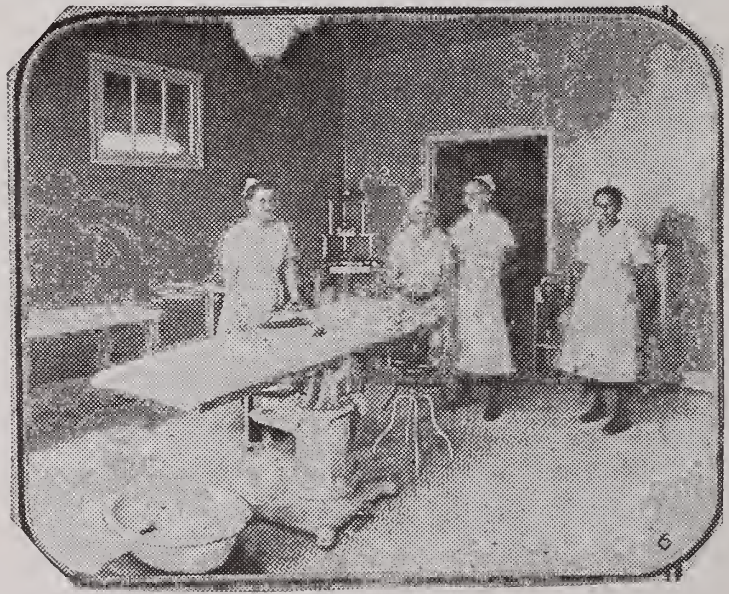

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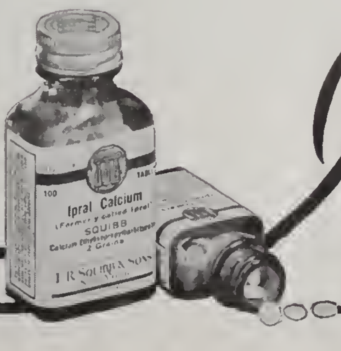

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Southern Surgical Supply Company, 893 Madison Avenue, Memphis, Tenn.
DeVilbiss Company, Toledo, Ohio.
Philip Morris & Company, Ltd., 119 Fifth Avenue, New York City, N. Y.
Heidbrink Company, 2633 Fourth Avenue, South, Minneapolis, Minn.
Puritan Compressed Gas Corporation, 2012 Grand Avenue, Kansas City, Mo.
Middlewest Instrument Company, 1870 Ogden Avenue, Chicago, Illinois.
Lederle Laboratories, Inc., 30 Rockefeller Plaza, New York City, N. Y.
Abbott Laboratories, North Chicago, Illinois.
The Mennen Company, 345 Central Avenue, Newark, N. J.
Dick X-Ray Company, Medical Arts Building, Memphis, Tenn.
Petrolagar Laboratories, Inc., 8134 McCormick Bldg., Chicago, Illinois.
Duke Laboratories, Inc., Long Island City, N. Y.
H. G. Fischer & Company, Inc., 2323 Wabansia Avenue, Chicago, Illinois.
Arlington Chemical Company, Yonkers, N. Y.
Wholesale Surgical Splint Company, 2537 Broad Street, Memphis, Tenn.
Mallinckrodt Chemical Works, 2nd and Mallinckrodt St., St. Louis, Mo.
Cameron Heartometer Company, 666 West Division St., Chicago, Ill.
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S. H. Camp & Co., Jackson, Michigan.
Drug Products Company, Inc., 26-32 Skillman Avenue, Long Island City, N. Y.
Rare Chemicals, Inc., Nepera Park, N. Y.
The Foregger Company, Inc., 47 West 42nd Street, New York City, N. Y.
Hynson, Westcott & Dunning, 58 E. Washington Street, Chicago, Ill.
The Borden Company, 350 Madison Avenue, New York City, N. Y.
Massey Surgical Supply, Inc., Bennie-Dillon Bldg., Nashville, Tenn.
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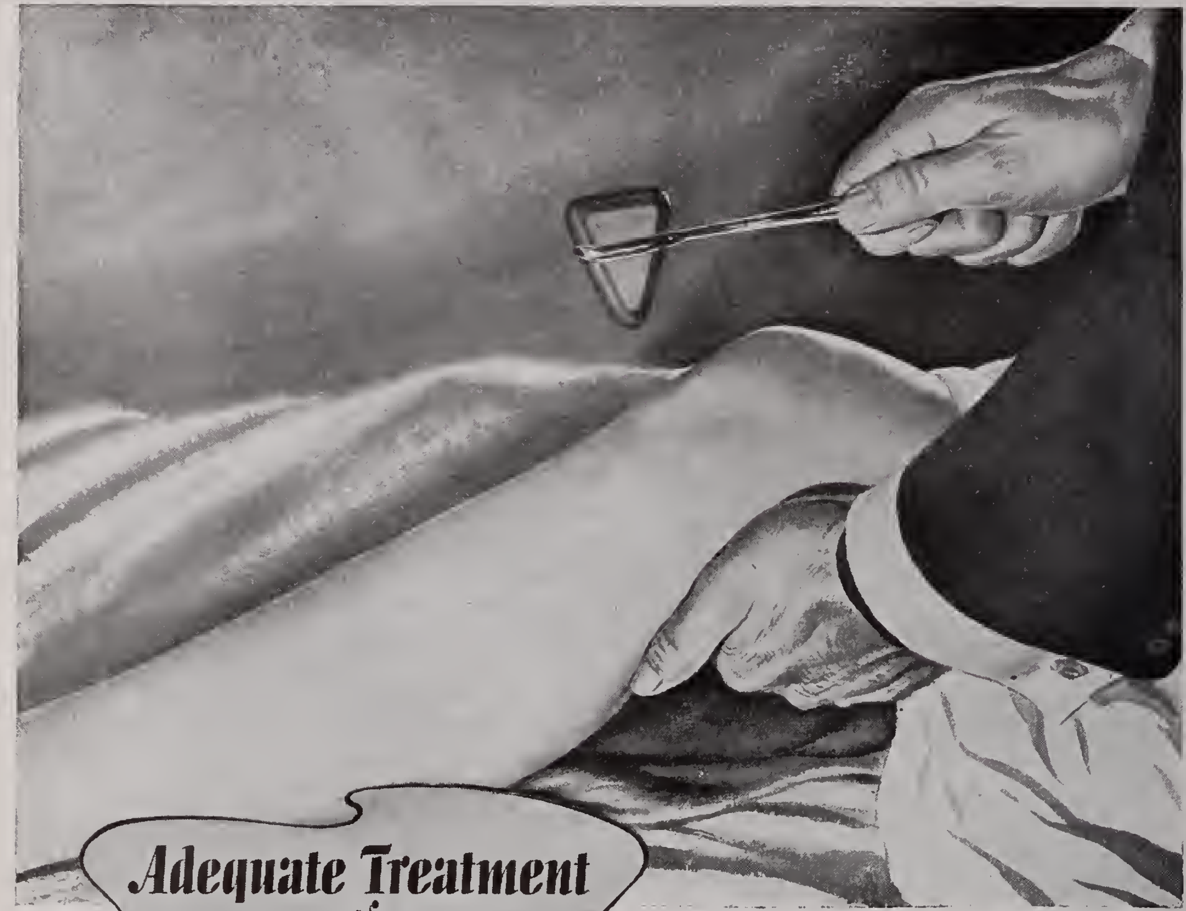

Adequate Treatment of Pernicious Anemia

● Of paramount importance in the treatment of pernicious anemia is the administration of adequate antianemic material, such as is contained in liver, to restore hemoglobin and red blood cell levels.

In cases where there is evidence that subacute combined degeneration of the spinal cord is present, therapy must be adequate to arrest completely all progress of the cord degeneration. Adequate doses of solutions of liver extract can be conveniently given by parenteral injection.

For this purpose the following preparations are offered:

Solution Liver Extract Concentrated, Lilly—Supplied in 10-cc. rubber-stoppered ampoules and in packages of four 3-cc. rubber-stoppered ampoules.

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Physiological Principles of Pre- and Postoperative Care of Surgical Patients*

FREDERICK A. COLLER, M.D.‡
ANN ARBOR, MICH.

Ladies and Gentlemen:

Perhaps no more important events have occurred in the treatment of surgical, and I might say medical, patients in the past five years than the recognition of the value of special care in relation to body chemistry. Many of the facts brought out are just as important to the physician taking care of the patient with typhoid fever and pneumonia, as to those of us taking care of a patient with peritonitis.

Provisions for rest, water and food are fundamentally important in the treatment of disease. It so happens that the water exchange of the body, a process related directly or indirectly to many of its complex chemical actions, has been of particular interest to me, and I want to present briefly data and conclusions resulting from four years of study on various aspects of this subject.

In conditions of health a person automatically cares for his water needs by responding to hunger and thirst. Fluid is taken up from the gastro-intestinal tract and is distributed to the blood, to the space between the tissue cells, and to the cells themselves. The main storage areas to meet emergencies are largely in the interstitial spaces of the muscles and subcutaneous tissues, but the quantities so kept will be shown later to be comparatively limited.

In many illnesses, the intake of an adequate supply of water offers no problem, but in others, an interference with the normal intake of fluid and the occurrence of abnormal outputs, places the maintenance of a satisfactory water balance beyond the power of the patient and in the hands of the physician. Many surgical conditions are complicated in this fashion, and it is often in these cases that the skillful handling of water requirements, as an important part of pre- and postoperative care, makes for a successful result rather than a failure.

Before going on to the water losses of surgical patients, a brief presentation of normal water exchange is in order.

Normal Water Exchange:

The maintenance of the normal water content of the body, which is approximately 70 per cent of its total weight, is brought about by a nice adjustment between the intake and output of fluids, the various components of which can be listed as follows:

Available water
1. Fluids drunk
2. Food: diet or body tissue
    a. Water content
    b. Water of oxidation

Excreted water
1. Water of urine
2. Water of stool
3. Water vapor

Fluids drunk vary from 800 to 2000 cc. a day, the higher intake occurring with active sweating. A considerable portion of the total supply comes from the food and is derived from this source in two ways: (1) its water content, which may furnish 1000 cc. daily, and (2) water formed on the oxidation of the food for energy, a chemical reaction possibly adding 200 to 400 cc. more each day.

Considering the output of water two main processes are largely involved: the removal of waste products through the kidneys, and the dissipation of heat. The economy of the body is evident in the small loss of water in feces, rarely more than 150 cc. daily, in spite of the fact that secretions poured into the upper gastro-intestinal tract along its course may total up to 10 liters during that time.

Water plays a large part in the control of body temperature, the constancy of which, under varying environmental conditions, is well known. With a wide range of normal activities, such as the routine work of a physician or nurse, without sweating, about 24 per cent of body heat is dissipated by vaporization from the skin and lungs, the remainder being by radiation from the skin surface. Under these conditions Newburgh and his associates found a group of adults to vaporize from 100 to 1500 cc. of water daily. When there is more heat to dissipate, as with hard physical labor, or when the temperature and humidity is high, water plays a greater part in the dissipation of heat, the sweating mechanism pouring fluid upon the surface of the body for vaporization, and large amounts of water are this dispersed. Since body temperature is kept so constant, it is in accord that we find this water needed as part of the control process to be taken from the available supply without regard for the needs of other functions, and as a result can be considered a "preferential process." Such is not the case with the kidneys. Waste materials are excreted in volumes of urine dependent upon the amount of water left after the "preferential processes" have been cared for. A large urine volume indicates a good supply of water, and of greater importance to remember, is that an inadequate urine output generally means insufficient water. I shall comment on this point again later.

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*Read before the Mid-South Post-Graduate Medical Assembly, Memphis, Tenn., Feb. 12, 1936.

‡From the Department of Surgery, University of Michigan.

The amount of water vaporized from the skin and lungs was of particular interest to us because of the many conditions to which surgical patients are subjected that increase this loss, and because there was no data available on how much to allow for this factor in calculations of the water needs of these patients.

Dehydration Attendant on Surgical Operations

The combination of conditions associated with major operations are such that most patients dehydrate to some extent on that day. Our first study on water exchange was to evaluate the fluid losses in the warm operating room and in the immediate postoperative recovery period of four hours, when the patient is bundled up with extra blankets and frequently perspires profusely. The essential finding for major operations during this whole period was a total fluid loss by blood, vomitus, urine, and vaporization averaging close to 1 liter. Water vaporized comprised 70 per cent of this figure. We learned that we could reduce the sweating loss by eliminating the extra blankets of the old-fashioned "ther bed," and have patients much more comfortable by simply returning them to a hot-water-bottle-warmed bed with only the usual covers. This procedure has been adopted as a routine on the surgical service and has been a decided improvement, with no increase in postoperative pulmonary complications.

Because of the large fluid loss during the operative and postoperative reacting period, some surgeons have found it valuable, particularly for long, rather bloody operations, to start a 5 per cent dextrose solution intravenously at the beginning of the operation.

Daily Water Losses of Surgical Patients:

In many instances fluids have to be given intravenously or subcutaneously to surgical patients to keep up with their water needs. The amount to be given can only be dealt with quantitatively when their daily water losses are known. The vaporization loss cannot be measured for each individual patient, but must be dealt with from average figures obtained from a study of representative cases under the various conditions met with. It was found that the simple uncomplicated surgical case vaporized about 1000 to 1500 cc. of water daily, this being approximately the same amount used by the healthy individual at light general activity. Patients with fever showed varying degrees of sweating, and as a result their water of vaporization increased to from 1500 to 3000 cc. per 24 hours, with a fair average of 2 liters daily. Heat production is increased in hyperthyroidism, and, as would be expected from their warm moist skin, their water of vaporization was above the normal and close to 2000 cc. daily. In general, for the sick surgical patient, the amount of water vaporized should be estimated at 2 liters daily.

During this period of the study sufficient fluids were given to the patients to permit a urine output of 1500 cc. daily. This volume was selected purely on a consideration of kidney function, which is, briefly, the excretion of waste materials in solution. Lashmet and Newburgh determined the amount of water required by kidneys of various ability to perform this function, and the following figures on the minimum amount of water needed to excrete 35 grams of waste material, an average daily amount, are calculated from their data:

Kidney	Maximum concentrating Sp. gr. of:	Minimum amount of water required to excrete 55 gm. of waste materials
Normal	1.032-1.029	473 cc.
Diseased	1.028-1.025	595
	1.024-1.020	605
	1.019-1.015	850
	1.014-1.010	1439

It can be seen that an individual with normal kidneys working at maximum concentration requires a urine output of about 500 cc. daily for normal function. With any volume appreciably less than this the normal kidneys cannot excrete the daily waste materials and retention will occur, as can be shown by the blood non-protein nitrogen rising to abnormal values. With renal disease and the consequent inability to form such concentrated urine, more water is needed to excrete the 35 gm. of wastes, until in the most severe disturbances, where the best efforts of the kidneys result in a urine of a specific gravity of only 1.014 to 1.010, close to 1500 cc. of urine must be put out daily to perform the same function that the normal kidneys can do with 500 cc. By adopting the desired urine output of not less than 1500 cc. daily for the sick surgical patient, one has an amount that will permit of all ranges of function. When urinary tract infections exist, a large volume is often desirable.

Calculation of Water to Maintain Normal Body Fluids:

The importance of the study on the water loss of surgical patients is that, when fluids cannot be taken by mouth and have to be given parenterally, the figures obtained can be used in calculating the amount of water needed to maintain a normal balance, as follows:

1. Water for urine ....1500 cc.
2. Water for vaporization ....2000 cc.
3. Abnormal losses of water
   vomitus, blood, diarrhoea
   drainage from biliary or
   intestinal fistulae, massive
   exudation from inflammed surfaces

The reasons for the urine and vaporization figures have been given. The abnormal losses, of course, must also be taken into account, since in some instances they may be appreciable amounts and are absolute losses in that they carry out no function and deprive the physiological water-using processes of material.

A failure to take the abnormal losses into account may result in dehydration in spite of what superficially appears to be a good intake of fluid. A consciousness of "water balance" is necessary here to avoid the common error of attributing the poor urine output to a toxic suppression of kidney function, whereas the real fact is that the surgeon did not supply the patient with sufficient water. There are many causes of anuria but the more unusual ones should not be considered until the water exchange of the few previous days has been checked over and dehydration as the etiological factor eliminated.

The amount of the abnormal losses, such as vomitus and drainage from intestinal and biliary fistulae, should always be measured by the nursing staff and recorded on the patient's chart, so that the volume lost is readily available for the calculations of fluid replacement. The question of the kind of fluid to give in such instances is taken up later.

Water Balance of the Dehydrated Patient:

An additional problem in water balance is presented by the dehydrated patient. The amount of fluid needed by them is not just enough for the mere maintenance of normal water exchange, but an extra amount is necessary to restore the body fluids previously lost. How can one tell how much has been previously lost? If one knew how much depletion of fluid is necessary to produce the clinical signs of serious dehydration, it would be practical to allow that amount when a patient is seen in that condition. Our investigation was continued to furnish data in this regard. Two healthy adult subjects were fed a dry diet that closely approximated their caloric requirements. After a short preliminary period, water was withheld for four days and three days respectively, until their urine output was insufficient to maintain the normal excretion of waste materials, as evidenced by a rise in the blood non-protein nitrogen to above 40 mg. per 100 cc. At this time all of the common clinical signs of dehydration were well established. The skin was hot and dry; the tongue showed practically no moisture on its surface; the eyes were sunken; the subject was a little irrational and had a degree of fever. The urine was highly concentrated, for the younger subject reaching a specific gravity of 1.041, and containing casts, red blood cells, and albumin. For both subjects the sericus effects produced were the result of a loss of body water amounting to approximately 6 per cent of their body weight.

When water was again given as wanted to these subjects, nearly all of the first day's total was retained to replace the body fluid previously lost. Little water became available to the kidneys until the body fluid deficit and the water for vaporization had been first cared for. All of these needs must be considered in dealing with the dehydrated patient. From the experimental results the factor of "water for the restoration of body fluids" can be calculated on the basis of 6 per cent of the patient's body weight. The total amount then to be given during the first 24 hours to a 60 kg. patient who enters the hospital with the beginning signs of serious dehydration would be as follows:

1. Water for urine (for the 24 hours)	1500 cc.
2. Water for vaporization (——)	2000 cc.
3. Abnormal losses, if any, during the 24 hours	
4. Water to restore depleted body fluids: 6 per cent of 60 kg.	3600 cc.
	7100 cc.

This is a lot of fluid, but several studies by us on dehydrated patients have clearly shown that it is only when such volumes are first given does water become quickly available to the kidneys and the urine output becomes satisfactory. Once the depleted fluids have been taken care of much less water is necessary to maintain normal water exchange.

Intravenous Fluids:

Having settled the question of the amount of fluid to be given to a particular patient, some consideration of the kind of fluid to give is in order. An analysis of the reason for the use of intravenous fluids in 100 surgical patients at the University Hospital showed that 80 per cent of them were not dehydrated, but were given fluid in this manner because through their disease or treatment they were not able or were not permitted to take in sufficient fluids by mouth. Their need was for water to maintain normal exchange and for sufficient dextrose to prevent ketosis. This can best be supplied by a solution of 5 per cent dextrose in distilled water, since the former is rapidly utilized in the body and the water is left available for all purposes. Since this 80 per cent group had not lost sodium chloride there was no need to give them a saline solution, and some danger in doing so from the development of edema. Twenty per cent of the analyzed group had been losing fluid from the gastro-intestinal tract, chiefly by vomiting. Such a loss, of course, carries away appreciable amounts of materials other than water, chiefly sodium chloride, and a salt solution, physiological saline or Ringer's solution, is needed for its replacement. For this group we alternated the salt solution liter for liter with 5 per cent dextrose in distilled water, until the blood chlorides and the carbon dioxide combining power of the blood was back to normal. Our standard solution for the parenteral administration of fluids is 5 per cent dextrose in distilled water, with a saline solution being given only when sodium chloride is needed.

The question of water intoxication has been raised on several occasions. I do not believe that the condition exists clinically. If fluids are not given faster than 500 cc. an hour, which is our rule, any excess of water can be excreted by the kidneys. A quantitative consideration of the water needs of surgical patients, while seeing to it that enough is provided, also avoids the giving of two much water, which is uncomfortable to the patient and interferes with rest.

Maternal Mortality

By W. A. RUCH, M.D.
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Much has been said and written during recent years about maternal mortality, and deservedly so. Statistics from the larger cities all over the country show a mortality rate that is far too high Reviewing them, one cannot fail to be impressed with the need of measures to alleviate the situation. Fortunately, it is one in which a great deal not only should be, but could be done.

Whatever the steps taken, they should be directed, first of all, toward improving conditions at home. With this purpose in view, a short time ago Dr. James R. Reinberger* compiled and reported the number of maternal deaths in Memphis and portions of Arkansas, Mississippi, and Tennessese within a radius of 150 miles during the years 1932, 1933, and 1934. Within that period, 13,688 births were recorded, and 156, or 1.14 per cent of the mothers died. Sepsis was responsible for 36 per cent of the deaths, toxemia for 26 per cent. hemorrhage, dystocia, and medical complications each for approximately 11 per cent, and ectopic pregnancy for approximately 5 per cent. The causes of the remainder were undetermined. Abortion complicated by sepsis and hemorrhage was responsible for 23 per cent of all the hospital deaths. It is encouraging to know, however, that death from this cause is being decreased by conservative methods of treatment.

In his survey, Dr. Reinberger included both hospital and home fatalities. It was found that there was one maternal death in every 538 hospital deliveries in contrast to one in every 203 home deliveries. Of significance is the fact that only 29 per cent of those who died were attended by private physicians, and, further, that 53.1 per cent of the deaths occurred outside the city. It is also worthy of note that the hospital which reported the smallest number of deaths had the fewest patients from rural districts.

In any effect to reduce these unnecessarily high figures, the primary considerations are better prenatal care and education of patients as to the value of its protection.

The objective of prenatal care is, in the words of Williams, "such supervision of the pregnant woman as will enable her to go through pregnancy safely, to bring forth a normal living child with minimum danger, and to be discharged in such good physical condition as to be able to suckle her baby for at least the first months of its life." Although physicians themselves generally appreciate the importance of proper medical attention for prospective mothers, they are not always zealous in their endeavors to instruct their patients in this respect. As an example of the efficacy of competent supervision throughout gestation, it has been shown that patients observed regularly during this period seldom develop toxemia. Not only is this true of those seen in private practice, but of those who attend maternity clinics, as well. Here, alone, is sufficient proof that prompt diagnosis of pregnancy and adequate prenatal care are vital factors in obviating complications and conserving the lives of mothers at childbirth.

The development of the preventive viewpoint in medicine has led physicians who were interested in obstetrics to study more carefully the various complications of pregnancy and labor and, in the hope of diminishing the risk to mother and fetus, to formulate certain cardinal rules which should be observed in carrying out examinations and treatment.

The first requisite in this program is that the physician obtain a complete family and personal history of the patient at her original visit. This is most essential, yet often is a practice given scant attention. The family history should reveal, in particular, any deformities or hereditary constitutional diseases, and the personal history should include an account of former pregnancies, and infectious diseases and their sequelae, accidents, injuries, and operations. The number, duration, and termination of abortions should be investigated, as well as the cause of any therapeutic abortions. The menstrual history should never be overlooked; the age of the patient at the onset of menstruation, its regularity, and especially the date of the last normal period from which the probable time of confinement is estimated should be determined. Numerous women have been exposed to the hazards of an abdominal operation simply because of the physician's failure to note the date of the last menstruation. Further, an obstetric record would be no record at all if it did not contain a complete marital history. The present age of the patient is also a noteworthy item. According to statistics, it is relatively safer for a woman to bear children between the ages of twenty and thirty than at any other time; pregnancy very early or late in life entails greater risk.

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*Reinberger, James R.: Investigation and Analysis of Puerperal Deaths in Memphis. Am. J. Obst. and Gynec., 32:170, 1936.

After completion of the history, an examination should be made of the vital structures all of which are altered to some extent during pregnancy. In examining the head, special attention should be given the teeth. Decayed teeth demand temporary care and infected ones demand extraction, irrespective of the stage of the patient's pregnancy. Oral antisepsis should be practiced unremittenly by the patient under the regular supervision of a dentist. Grave consequences, in the form of organic or systemic infection, secondary anemia, and extreme debility may develop from badly diseased teeth.

The condition of the heart function should never be omitted in the general physical study of the prospective mother. The competency of this organ should be watched carefully throughout the prenatal course, in order that any abnormality might be detected in its incipiency or any disease already present might not become a dangerous consideration.

Palpitation of the abdomen will reveal the amount of distention, the contour, and the height of the fundus above the symphysis, and thus will aid in determining the stage of the pregnancy. A note should also be made of the site, rate, and character of the fetal heart tones.

Following these procedures, the next of paramount importance is pelvic mensuration. No physician of today can afford to expose himself to censure and his patient to unnecessary hazards by neglecting to practice routine pelvimetry. The patient with the small pelvis should never be permitted to undergo a long labor when natural birth is impossible from the outset.

After a thorough history has been obtained and the physicial examination completed, the patient should receive minute instructions as to correct hygeine, including matters of diet, rest, exercise, bathing, and care of the breasts, also the clothing to be worn by herself and that required for the newborn child, and, finally, the signs of labor. Both doctor and patient will find it a convenience to have this information printed in pamphlet form.

It is essential that the expectant mother be seen by her doctor often enough throughout pregnancy to enable him to keep fully informed of her condition. The normal pregnant woman should visit her doctor every three weeks until the seventh month, then every two weeks until the ninth month, and once each week thereafter until delivery.

Three things should be done at each visit, without exception. The patient's blood pressure should be taken (a marked rise probably is the first symptom of developing toxemia), a fresh specimen of urine should be examined, and her weight observed. In addition to these indispensable items, it is well to bear in mind that a patient should never be given the impression that she is being rushed. She will co-operate best and return for observation as often as necessary if the physician takes ample time to answer such questions as she may offer. She should be encouraged, moreover, to report any unusual symptoms, as violent or obstinate nausea and vomiting, chronic constipation, severe and persistent headache, any disturbance of vision, a vaginal discharge, bleeding of any type, swelling of any part of the body, or eruptions or sores of any character.

At the first visit, or at least during the first trimester, the patient should have a complete blood cell count. This should be repeated during the sixth or seventh month. If the blood picture is below normal, therapeutic measures should be instituted. It is also advisable to have a Wassermann test of the blood made in every case, and certainly in those in which there is a suggestive personal or family history.

The number of vaginal examinations to be made is a matter of personal opinion. A monthly examination is considered advisable by some doctors, whereas others regard only two as sufficient: one early in pregnancy and the second in the latter half of the eighth month. The birth canal should never be invaded, however, as full term is approached or if the patient is near or in labor.

The doctor practicing obstetrics, therefore, is directly responsible for the high maternal death rate insofar as he fails to carry out the following procedures:

1. A proper physical examination of every patient.
2. A check of the blood pressure, urine, and weight of all patients at every visit during the prenatal period.
3. The elimination of foci of infection.
4. The prompt recognition of pathologic conditions which call for hospital treatment.

To follow these precepts in those cases which come under his observation is the first duty of every physician. This, however, does not solve the whole of the present problem of reducing maternal mortality to a minimum. A large percentage of patients, particularly those living in the country, will not seek medical advice until late in the course of pregnancy, either because of lack of knowledge or because they are unable financially. The matter then becomes one of education. Local medical societies must reach such patients and advise them of the importance of early prenatal care and the measures to be carried out for delivery of a normal child with the smallest risk to themselves. The economic question will, sooner or later, be one for solution by the state, for which the necessary influence must be brought to bear by the state medical society upon information furnished by the county societies.

In brief, the reduction of maternal mortality, as I see it today, must be achieved, first, by improving the type of obstetrics practiced by each and every one of us who attempt deliveries, and, second and most important, by accomplishing the difficult task of teaching prospective mothers to avail themselves of medical care throughout pregnancy.

Treatment of Pneumonia With Special Reference To Specific Therapy

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While we point with pardonable pride to the great decline in death rate from most acute infectious diseases, notably tuberculosis, the average mortality from pneumonia is essentially the same to-day that it was a generation ago. Not being a reportable disease, there are no reliable statistics as to the incidence of pneumonia but it is doubtful that it is on the decrease as some observers claim.

Although more than a half century has elapsed since Fraenkel first described the pneumoccus as the cause of pneumonia, the most important advances in the study of the disease have occurred within the last two decades. The first step toward specific therapy came when Neufeld and Handel identified fixed types of pneumococci. This subdivision is based on the capacity of the different types to produce specific agglutinin, precipitin and protective bodies. This led to the preparation of a specific anti-pneumococcus serum which was first used clinically by Cole at the Rockefeller Institute where 105 cases were treated with a mortality of 7.5 per cent compared with the usually accepted average of 25 per cent.

Although the value of specific serum therapy was now well established, its use continued to be limited partly because of the large volume of serum necessary to treat a case and because of lack of facilities for rapid and accurate typing of the sputum.

The first of these obstacles was eliminated to a large extent with the production by Felton in 1924 of a method of concentrating the serum and at the same time of reducing its protein content. The problem of rapid typing has now been solved by the application of the Neufeld method which can be carried out satisfactorily by a trained technician in any chemical laboratory. This method of typing is based on an observation made by him and published in 1902. He noted that in the presence of homologous serum the capsule of the pneumococcus became swollen The technic of making the sputum test has been greatly simplified and the biological houses now have available diagnostic anti-pneumococcus rabbit sera with which within a few minutes, any of the thirty-two known types can be identified. But since therapeutic sera is available only for Types I, II, VII, VIII for practical purposes it is important to test particularly for these.

The question of the efficacy of specific therapy of lobar pneumonia is answered convincingly in a statistical review published last year by Belk. He tabulated "all the reports in America and Foreign Literature up to January 1935 that lend themselves to statistical study." He collected 4,726 cases, of which there were 2,867 who received concentrated anti-pneumococcus serum, with 1859 controls. His study covered a ten-year period, 1924 to 1933 inclusive, thus eliminating the variability in virulence of the pneumococcus which is known to occur from year to year. The following is a summary of his collected cases:

There were in all 2,028 cases of Type I, of which 1,138 were treated, with an average mortality of 15 per cent; and 890 controls with an average mortality of 25 per cent.

Among the treated groups the highest mortality was 26 per cent and the lowest 5 per cent; the highest mortality in the control group was 31 per cent and the lowest 15 per cent. Thus in every 100 cases treated ten lives were saved.

There were 1,476 cases of Type II of which 677 received serum with an average mortality of 30 per cent as compared with 37 per cent in the control group of 799 cases. The highest mortality in the treated group was 40 per cent and the lowest 20 per cent. In the control group the highest mortality was 52 per cent and the lowest 27 per cent. Thus in the Type II series there were 7 lives saved in every 100 cases treated.

There were 100 cases of Type VII, 15 of

which were treated with a mortality of 7 per cent as compared to 26 per cent in the 85 control cases. On this basis, if all had been given serum, 19 lives would have been saved.

Finally there were 122 cases of Type VIII. Of these 37 were treated with a mortality of 5 per cent; 85 were untreated with a mortality of 16 per cent. If all had received serum 11 lives would have been saved for every 100 cases treated.

In the evaluation of the results of specific therapy there are four factors which should be taken into account aside from the type of the invading organism. These are:

(1) the age of the patient,
(2) the virulence of the infection,
(3) the presence or absence of a bacteremia,
(4) the stage of the disease when treatment is begun.

Lobar pneumonia is most fatal at the extremes of life, infancy and old age. The lowest mortality is found in childhood. After fifteen years of age the mortality rises steadily with each added decade.

Not only does the relative incidence of the different types of pneumococci vary from year to year but there is a wide difference in the virulence of a given type. Failure to take these facts into account probably explains some of the discrepancies in reported results with treatment of a nonspecific character.

There is no factor that adds so much to the gravity of the prognosis as a blood stream infection. This applies to all types. Belk analyzed 459 cases which gave a positive blood culture. Of these 293 were Type I and 166 Type II. Of the Type I group 190 were treated with concentrated serum with an average mortality of 33 per cent. There were 103 controls which showed a mortality of 60 per cent. In the Type II series 69 were serum treated with a mortality of 55 per cent ;there were 97 controls with a mortality of 69 per cent.

In all types, those with a bacteremia as well as those with a negative blood culture, the extreme importance of commencing specific treatment early is shown in all published reports. For example, in a series of 504 cases of Type I recently reported from Massachusetts, 377 received serum within the first three days with a mortality of only 8.5 per cent as compared with 18.9 per cent in 127 cases in which treatment was begun on the fourth day. Hence the importance of early typing if serum therapy is to be used.

Serum Administration

When a clinical diagnosis of lobar pneumonia is made, a decision should be made at once if serum is to be used, and immediate steps taken to determine the type. If the patient is not seen until after the second day, and there is likely to be some delay in determining the type, a preliminary dose of bivalent Type I and Type II serum may be given while waiting for the laboratory report. Since nearly 60 per cent of all cases are either Type I or Type II this procedure is justifiable especially if the patient happens to be a young adult.

Precautions to be Observed

Before any serum is given there are certain precautions which should always be taken. In the first place there are certain individuals to whom serum should *never* be given under any circumstances. They are:

(1) Those who are known to be allergic to horse dander or who develop allergic symptoms when exposed to horses.
(2) Those who have had horse serum in any form 7 days to 3 months previously because of the danger of anaphylaxis.
(3) To infants or elderly people or those who for any reason are greatly debilitated.
(4) Those who are in extremis or who show symptoms of congestive heart failure.

There is another group in whom the use of serum entails more than average risk. These are:

(1) Those with a personal history of allergy of any kind or who give a family history of allergy, especially if some member of the family is known to be sensitive to horse emanations.
(2) Those who have had horse serum in any form more than three months before.

Regardless of the history, it is well to test each patient for hypersensitiveness to horse serum. The simplest methods are to instill a drop or two of the serum into the conjunctival sac or to inject intradermally 0.1 cc. of serum diluted 1 to 10 with normal saline solution. If a positive reaction is obtained the patient should be desensitized before proceeding with the treatment.

Serum should never be given without having epinephrin solution immediately at hand with hypodermic syringe loaded. If possible the serum should always be given intravenously. While some benefit may be expected when given intramuscularly, the results are always uncertain.

Dosage

There is no fixed dosage, nor is it possible to calculate in advance the total amount of serum that will be needed. The initial dose should not exceed 10,000 units, and this must be given very slowly, allowing at least 5 minutes for the first cubic centimeter and not less than 15 minutes for the entire dose. If there is no reaction another 10,000 units may be given at the end of four hours. After this, 10,000 units should be given every four hours until there is a definite clinical improvement or until at least 100,000 units have been given. The earlier the treatment is begun the smaller the total amount that will be needed. The Type II cases usually require considerably more than other types.

Vaccine Treatment

Pneumococcic vaccines have been used in the treatment of pneumonia for the past twenty-five years, and all published results indicate an unmistakable clinical value. Nevertheless there are many who still question the efficacy of vaccine treatment. In 1913 Rosenow and Hektoen reported 146 cases treated with vaccines with an average mortality of 23.3 per cent, compared with 148 control cases treated without vaccines with an average mortality of 37.8 per cent. Rosenow five years later reported 200 additional cases treated with vaccines with a mortality of only 7 per cent. In 1926 Dr. Alexander Lambert reported a series of 221 cases treated with vaccines at Bellevue Hospital covering a period of four years, with an average mortality of 21.2 per cent, compared with 40.5 per cent in a control series of 286 cases. Other writers have reported comparable results.

Those who refuse to use vaccine treatment usually point to the experimental work of Howell who injected three healthy soldiers with pneumococcus lipovaccine and found that protective bodies appeared in the blood from the seventh to the fifteenth day. He concluded, therefore, that these protective bodies develop too slowly for the vaccine to be of value as a therapeutic agent.

Prophylactic Pneumococcus Vaccination

The value of prophylactic pneumococcus vaccination was proved by Cecil and his associates in the army camps during the late war. Among 13,460 men who received the vaccine 155 developed pneumonia with a mortality rate of 12.2 per cent. In the same camp there were 3,415 unvaccinated, 327 of whom developed pneumonia with a mortality rate of 22.3 per cent.

Thus the value of pneumococcic vaccine, both in the prevention and in the treatment of pneumonia seems to be definitely established. In the use of vaccines as well as sera the importance of early administration can not be over emphasized. There is no theoretical nor practical reason why the vaccine and serum should not be used simultaneously.

Dosage of Vaccines

There is no standard method for calculating the dosage of vaccines. In the average adult patient we have found that 0.5 cc. every 8 to 12 hours is well tolerated. In the presence of an acute infection such as pneumonia we have never seen any harm come from early large doses of vaccine at intervals or in those who are weak and debilitated the dose must be graduated accordingly.

Selection of Vaccines

Where the type of infection is known, obviously a vaccine for that particular type should be used if available in preference to a mixed vaccine. If, however, a specific vaccine is not available, mixed vaccines should be used provided it contains the particular type needed. Or, if facilities for typing are not accessible, a mixed vaccine should be started at once. Lambert, who used only mixed vaccines, showed the extreme importance of commencing treatment early. If, for any reason there is likely to be some delay in getting the sputum typed, a mixed vaccine should be used until the specific type is known.

Summary

1. The value of anti-pneumococcic serum is well established and should be used more often. When treatment is begun within 48 hours onset the average mortality is reduced fully fifty per cent.

2. Pneumococcic Vaccines have been used effectively in the treatment of pneumonia for twenty-five years. Where they have been used in large series with controls the mortality has been reduced almost as much as with the serum. Since vaccines are available to all they should be used more routinely. And like the serum the best results have been obtained when treatment is begun early, preferable within forty-eight hours from onset.

Yellow Fever In Mississippi 1878-1905

HARRIS ALLEN GANT, M.D.
Columbia, Tenn.

CHAPTER VIII

1899

The work this year was very much less strenuous than during the two previous years. There were comparatively few cases of yellow fever in Mississippi in 1899. Smallpox prevailed in many places in the state during the early months of the year. and my time was occupied in looking after that disease and trying to enforce vaccination, which was violently opposed by many people, and some of the doctors, because of the mild type of the disease. They called it "Cuban Itch," "Impetigo Contagiosa," and other things, and refused to be vaccinated. Some of the doctors declined to urge upon them the necessity of such a measure.

On May 30th I was instructed to go to New Orleans, as suspicious cases of fever had been reported by parties coming to Mississippi. I saw Dr. Souchon, President of the Louisiana State Board of Health, and Dr. Konkhe, President of the City Board of Health, who gave me the clinical history and post-mortem findings in the Grillo case, a patient who had died of yellow fever on the 28th inst. On June 1st, I had another conference with the health officers and visited charity hospitals, Touro Infimary, and the New Orleans Sanitarium, and on June 2nd, visited suspicious cases in different parts of the city. On June 4th, I visited the inmates of the house where the Grillo patient died, in company with Dr. Murray. On June 5th, I visited a number of patients on Rampart, Dauphine, and Congress Streets with Dr. Konkhe. On June 7th, I ran out to Bay St. Louis, Pass Christian, Gulfport, Ocean Springs, Biloxi, Scranton, and Moss Point, and found those towns without suspicion of yellow fever. Returning through New Orleans, I saw Dr. Konkhe, Souchon, Carter and Ashton, who reported there had been no further developments from the Grillo case. I then returned home, June 15th. On the 20th while at Oxford, Dr. Haralson and I had instructions to go at once to New Orleans, where we were informed by Dr. Souchon that a case suspicious of yellow fever had been reported to him at Lutcher, La., on the Y and M V Railway. We immediately proceeded to Lutcher, visited the patient, and reported as follows:

To: Dr. J. F. Hunter
Jackson, Miss.

"In response to your telegram we left Oxford, Miss., yesterday morning at 10 o'clock, and proceeded to New Orleans where we had an interview with Dr. Souchon, President of the Louisiana State Board of Health, who laid before us in detail the facts in the case of suspicious fever reported to him on the 19th inst. from this place. Taking the first train out of New Orleans, we arrived here this morning at 10 o'clock, and, in company with Dr. Jones, the local physician, visited the patient, John Topelo, a white boy 18 years old, Italian, seven months in this country. Seventeen days ago he had a chill, and has had one every other day since. Today he is up. Pulse 84; temperature normal, tongue broad and flat with yellowish coating; not injected underneath; gums not particularly engorged; not spongy or bleeding, and rather pale; eyes not injected or yellow; liver and spleen engorged, the latter enlarged. Patient gave no evidence of prostration. On yesterday he had a chill with temperature of 104; urine tested yesterday for albumen with negative results, and again to day without finding a trace of albumin. We, therefore, concluded that no suspicion attaches to the patient, and are at a loss to know why the case was reported as suspicious to the Louisiana State Board. As we wired you, we will leave at 5 o'clock this evening for Vicksburg, where we shall expect to hear from you tomorrow as to our future movements.

Signed Gant and Haralson.

Sometime during the early summer months a report became current in Water Valley, and at several places along the line of the I. C. railroad, that there were probably two cases of yellow fever in the family of Mr. Ragland at Taylor. It was said that members of the family who were absent from home during the epidemic of the previous year, had returned during the winter, and were sick, and the "busy bodies" put out the report that they were sick just like people who had had the fever during the previous summer. Our town became so much excited over the rumors that I went to Taylor, investigated, and found no foundation whatever to the report. The house had been disinfected, only one of Mr. Ragland's daughters had been sick, with a simple malarial attack.

On July 1st or 2nd, I had instructions to go to Mobile, for the purpose of inspecting that place and the Mississippi Coast towns. On July 3rd I had a conference with Dr. Saunders, State Health Officer of Alabama, Dr. Catchum, other local physicians, and Dr. R. D. Murray, of the M. H. S. On the following day I saw Dr. Acker, County Health Officer, Dr. T. S. Scales, President of the Mobile Bay Board of Quarantine, and Dr. Rhett Goods, City Health Officer. I studied the record of the city board of health and found the mortality not above the usual average for that season of the year. I was unable to find any suspicion of yellow fever in that city. I reported the station was well managed, and that all necessary precautions were being enforced. I then went to the towns along the Mississippi Coast, Scranton, Moss Point, and Ocean Springs. I returned to Biloxi, and on July the 11th went to Mississippi City and Handsboro. On the 12th returned to Mississippi City and had a conference with Dr. Harry, who reported Handsboro and Mississippi City free of any suspicion of any contagion, or infectious disease. He mentioned the fact that there had been some forty out of sixty-four children at the Weif's Home sick from the first to the middle of June, and that he called Dr. Bolton and Murray to see the cases. Dr. Murray in his report to Surgeon General Wyman says, "The disorder lasted from 18 to 36 hours, characterized by headache, moderate fever, and constipation. In three cases it occurred twice. In one adult once, and in five or six children once. I decided it was not due to any infection, malaria, bad water, or poor food, but to the dry weather heat, which prevailed for three months."

Dr. Harry states, and so did Dr. Bolton, that there is positively no one now sick at the Weif's Home, and they have been unable to decide what the disorder was, accepting Dr. Murray's diagnosis which in my opinion was rather unsatisfactory. I tried to impress on Dr. Harry the necessity of watching the situation very closely, for while I do not believe from the history given that the disorder was yellow fever, still it is possible the children might have become infected from clothing sent them from New Orleans, and had the disease in a mild form. Dr. Harry states that he tested the urine in only one case, finding no albumin, and that the highest temperature in any case was 103 degrees. It will be remembered that this was before the establishment of the mosquito transmission theory, and we were all still thinking about fomites. This is probably an instance where all the children or at least the majority of them had mild yellow fever. However, there was no outbreak from this institution.

On August 10th, Dr. Souchon, President of the Louisiana State Board of Health, informed the Mississippi Board that a prominent and reliable merchant had received a letter saying "yellow jaundice is prevailing along the line of the G and S I Railroad, and these is a great deal of talk about some cases of fever, which they are calling yellow fever," and requested that an investigation be made of Gulfport and the G and S I Railroad. I was instructed to make this investigation. Dr. R. D. Murray, M. H. S. had had the same informaton from Dr. Souchon, and returning the same afternoon from McHenry where he had investigated the situation, reported nothing of importance

On August 12th, I investigated the town of Barnes, on the G and S I Railroad, saw Dr. Culpepper, the local physician, and found that he had nothing in his practice suspicious of yellow fever, and gained the information from him that there was nothing at Wiggan, a town some eight or ten miles from Barnes, where much sickness had been reported, and four deaths had occurred in the last three weeks from typhoid fever. From Barnes, I went to McHenry, saw Dr. McCarty and gained from him information that although there had been several cases of jaundice, there was nothing significant in the fact that they were non-febrile and chronic. There had been also three or four cases at Saucier, south of McHenry. I then went to Gulfport, Pass Christian, Bay St. Louis, Ocean Springs, and Biloxi. From this time until the 28th, I was constantly going from town to town looking into the situation. And on the above date, was directed to go to New Orleans where the Adolph case, at 4520 Camp Street, had been reported as yellow fever. I concurred in that diagnosis, and the Mississippi Board declared quarantine against New Orleans. On Sept. 3rd. upon request of Dr. J. J. Harry, local inspector for the State Board, went to Mississippi City, and visited with him and Dr. Murray, four persons sick in the boarding house of Mrs. Harvey at that place. There had been four other sick children in the house, since the 22nd of August, who had recovered. After examination I was unable to say that the sickness was yellow fever, but made an appointment to return and went back to New Orleans.

In the meantime Drs. Murray, Horton, and Saunders saw the sick, but were not positive as to the nature of it. Dr. Saunders was more inclined to think it yellow fever, and on the next day finding albumin in the case of Dr. Noland, who was one of the most pronounced cases, we announced that the disease was yellow fever. There were 150 cases and three deaths in Mississippi City during this outbreak. Dr. Harry was placed in charge of the situation as State Health Officer and the place was immediately quarantined under him. I remained and assisted him until Sept. 23rd, when I was instructed to go to New Orleans, to confer with Dr. Carter, about day light communication with Ocean Springs and Biloxi and other coast towns, with New Orleans. On Sept. 24th, Dr. Carter and I went to Bay St. Louis, Biloxi, Ocean Springs, and the following day to Gulfport, Long Beach, and Pass Christian, and conferred with these communities. Sept. 2th, I was instructed to go to Centerville, Mississippi, where I found a case of yellow fever, five miles east of the town, in the person of a young man named Charlie Johnson, who had returned from New Orleans, getting off the train at Norwood, La., and driving through the country to his home, thus evading the quarantine. Sept. 28th, I returned to Biloxi and submitted certain rules and regulations agreed upon by Dr. Carter and myself,. in accordance with which we believed it would be safe to have communication with New Orleans. These requrements or conditions were rejected by the board of mayor and aldermen of Biloxi, and on the next day the same regulations were submitted to the board of mayor and aldermen of Ocean Springs and likewise rejected, agreeing, however, that there was really no objection to the regulations but owing to the lateness of the season, and the fact that Biloxi had rejected the same offer, Ocean Springs did not put the regulaions into effect. On October 9th I was instructed to go to Centerville and look after the situation. I found no yellow fever had developed from the young man Johnson. Dr. Street, County Health Officer, had managed the case most successfully, and further infection of the town was prevented, making the fourth town in the state where yellow fever appeared and was not permitted to infect the community.

Dr. Carter had less trouble handling the situation out of New Orleans this year, than in 1897, when there was so much opposition to quarantine on the Mississippi Coast, since the people had no fear of the disease, were absolutely indifferent to it. In the interior towns, however, an inordinate fear and panic caused much opposition to the enforcement of health regulations. Dr. Carter was kept very busy in and out of New Orleans, looking after and supervising fumigation and disinfection of all sorts of freights, and placing guards and inspectors on all trains out of the city into Mississippi and other states. He had instructions to go to some town in Texas, and just before his train entered the town the conductor got off, and soon came back with another man who said, "Are you Dr. Carter?" Upon being answered in the affirmative he said, "You are from New Orleans, and our town is quarantined against New Orleans, and you will not be allowed to enter the town." Dr. Carter told him that he was a health officer of the U. S. Government, and had been ordered by the Surgeon General of the P. H. S. in Washington to go to that town, and that he had authority and if necssary the force of the U. S. back of him.

The man then informed him that there was a crowd of men just ahead of the train on the railroad track, that the spikes had been removed from the cross ties, and the rails would immediately be taken up, if the train advanced beyond that spot. Finally, Carter gave up the argument and returned to New Orleans. I asked him why he did not go into the town anyway calling upon loyal citizens to help enforce the authority of the government. He replied, "I have long since learned, 'there is no use fooling with a fool', and with a mob." This incident shows how fully and correctly he understood the rights of towns, counties and states as well as the limitations of quarantine enforcement by the authorities.

While at Mississippi City, at one time during this epidemic, many reports came to us of the probability of there being cases of yellow fever in Biloxi, where it had prevailed so extensively in 1897. We concluded it would be proper for us to go there and investigate the situation in order to quiet the excitement in New Orleans, and towns along the coast. When the citizens of Biloxi heard that we were coming into town, they positively refused to let us make an investigation, and some of the citizens, who two years previously had been our best friends, were most vigorous in protesting against an investigation by us. However, Dr. H. M. Folkes, in whom we had implicit confidence, upon hearing of the opposition to our going into the town, wired us that he thought all suspicion of yellow fever was without foundation, and that he would himself investigate and report to us. This he did without finding any yellow fever, and in this manner the question was settled.

It was during this year in October that Dr. Carter had instructions to report at once in Chicago. I remember that the weather was still warm in New Orleans, and Carter had on his very light summer clothes, and wore a straw hat. When he received the telegram instructing him to go to Chicago, the through train was just about ready to leave the station. So he made no preparation whatever but rushed to the train, and the next morning which was Sunday, found him on Michigan Ave. in Chicago. The weather had turned colder, and a stiff breeze was blowing from the Lake. He said he was quite a spectacle, where every one else wore winter clothes and overcoats, and his summer apparel was very uncomfortable, and he almost froze. He tried to find an open store where he could secure some warmer clothing, but could not find even a Jew store open. So he had to go to a hotel, and succeeded in getting in touch with a friend in the city who came to his relief.

From his headquarters in New Orleans, Carter would go anywhere, at any time, to assist the local authorities. He worked earnestly, untiringly, most intelligently and effectively. He was invaluable at McHenry, at Taylor, Orrwood, Jackson, and other places. Dr. Haralson, who worked with him at McHenry, had this to say, "I unhesitatingly state that in my opinion, Surgeon H. R. Carter of the M. H. S. is one of the ablest and safest sanitarians in the whole country, and as health officer in charge of McHenry, I cheerfully acknowledge my obligations to his skill and counsel in the great sanitary work done in this town."

Dr. J. F. Hunter, the executive officer of the State Board of Health at Jackson, Mississippi, says, "Surgeon H. R. Carter paid several visits to Jackson, not only helping us in his official capacity, but helping to treat and nurse the very ill patients, and we owe him an everlasting debt of gratitude for his kind services." At Orrwood, Taylor and Water Valley I give him full credit and am filled with gratitude for his earnest, unselfish assistance and his wise suggestions as to the management of the epidemic in north Mississippi. It was through his influence and executive ability that some order was brought out of the chaotic condition in 1897, and that the whole situation in the Southern states where fever prevailed was so successfully handled in the two following years. I cannot better express the improvement in quarantine matters, than by givng the contents of a letter written to Dr. J. F. Hunter, by C. S. Clark, Supt. of the M and O Railroad, running through Mississippi, and this is only one of the expressions of appreciation of the manner in which the fever was handled in '98 and '99.

"My dear sir:

In reviewing the subject of quarantine. I cannot refrain from contrasting the conditions that existed since the epidemic of 1878, with 1897, '98 and '99. In 1878 perfect chaos existed. There was no well defined plan of procedure by any state, county or community Very little was known of the disease, and in consequence, the wide-spread panic and ruination of business interests ensued. We were providentially cared for from 1878 until 1897, with the exception of 1888, when the fever existed at Jackson, Miss., and a few other points, but it did not attain any considerable force. The year 1888 showed some improvement on methods and knowledge as compared with 1878. It was still very crude, and no understood plan of work existed between the various state boards of health, since little confidence was reposed in them by the counties and communities at large, although a strong effort was made to systematize health conditions and regulations. Down to 1897, when the fever attained great force, and was not recognized until late in the season, thus permitting itself to be communicated in all directions, thereby creating a panic and stagnating commercial and social conditions, it never attained the same degree nor the same effect in business circles as in 1878. The sanitary people, and those in charge of health matters of the various states, made a study and were better equipped for handling the scourge. However, as you well know, the people could not be educated as the sanitary and medical men were; consequently, the people were somewhat panic stricken and adopted measures that were very drastic and arbitrary. After the scourge of 1897 had died out, representatives of all the states met and adopted a plan of procedure in case of further epidemics. This was the ground work and was the means of educating the people and bringing to their attention the necessity of reposing in the health and medical men of the various Southern states that confidence which is necessary in order that results could be obtained with minimum detention to persons and freights. consistent with stamping out the plague. The masses had become so imbued with the regulations of the State Board of Health of Mississippi and Alabama, which permitted freights to go in and out of the infected places without danger of infecting free or healthy territory, hat a very different attitude existed in 1898.

I speak advisedly and knowingly, being one of the factors in administering this principle under the guidance and direction of those honorable bodies. In 1888 the scourge again visited us. The people had become thoroughly familiar with this subject, through the papers of the various medical and sanitary men in convention, and through the columns of the press which aided this work so much that their worth is not capable of being estimated in dollars and cents or in security to home and property. Your honorable body has been able to take gigantic strides towards the solution of the question of quarantine, and to no other Southern state, with the exception of Alabama, does the credit of this successful work belong more than to the State of Mississippi. It has been my good fortune to have known your board personally, and I can say with truth and candor that your achievements have been, and do rank among the foremost in the sanitary and quarantine science. In making a resume of the situation, it can be summed up in these words: 1878, bad; 1888, slightly better; 1897, fair; 1898, good; 1899, excellent.

"The people of Mississippi have much to be congratulated upon. While the state has suffered perhaps more than any other state, owing to its geographical and commercial position, yet it has made and established principles of sanitation and quarantine that will eventually cause this scourge to be entirely dropped from the list of terrorizing and demoralizing maladies. If I had figures with me that I have kept in the various years, I could demonstrate this matter very closely.

"I trust that the present state board of health will be perpetuated, and that the good work which you, and those connected with you who are now thoroughly cognizant and conversant with what is necessary for the state's protection, will be permitted to work out the solution which is almost now accomplished.

With kindest regards, I am

Yours truly,

G. S. CLARK,
General Supt.

THE MISSISSIPPI DOCTOR

The Journal with a vision, the delivery of modern medicine to the masses at less cost to the individual and more profit to the practitioner. The champion the small hospital, the hub around which this service must be built.

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DR W H ANDERSON
BOONEVILLE MISS
BECAUSE OF FLOOD CONDITIONS WE ARE CANCELLING MEETING MIDSOUTH ASSEMBLY THIS MONTH
DR A F COOPER

The Mid-South Post-Graduate Medical Assembly, formerly the Tri-States, has been faithful to the trust for more than a half century. For about twelve years it has had a steady growth. It has shown the way. It is just a little different from any other association in North America. It gives a post-graduate course in four days and nights covering the field of medicine and surgery by the outstanding authorities of the nation. Each essayist is given one hour and there are no discussions. At the round-table discussions questions are asked and answered. The exhibitors bring the latest in books, surgical instructions, x-ray equipment, biologicals, et cetera. The cream of the profession attend the meetings, The swapping of ideas with these men is very valuable. There are no sections in this association. All sit and listen to each paper. This has a broadening influence. Memphis, the greatest of all Southern cities perhaps, is keeping alive the traditions of the Old South and at the same time going forward with the development of the new and the progress of the nation. Memphis is cultured and cordial. It has a fine medical atmosphere. Its schools are growing steadily. Its medical men continue to gain prominence. The members of the profession have a friendly hand and they are generous entertainers. It is with very deep regret that this session can not be held. But it is not practical. The flood has caused too much distress and suffering. The outcome is yet too uncertain. The gerenous profession of Memphis is loaded with work with the unfortunate. Many people who attend regularly could not reach Memphis with out danger and difficulty. The next best thing for more than a thousand devoted friends of his association who attend it regularly is to read the paper that you expected to hear. We are asking and urging the essayists to send their papers right on to The Mississippi Doctor so that you may have this privilege and enjoy this benefit. We expect to be able to give the majority of the papers. May we continue to have the cooperation of our many hundred readers.

"The Business of Saving Lives" was the subject of the ninth broadcast over WDJX of a series which the Mississippi State Board of Health is sponsoring for the benefit and information of the public. On Saturday, January 23, Dr. H. C. Ricks, Director of County Health Work and Epidemiology, talked about the prevention of disease on a wholesale basis.

"Epidemiology," explained the Director, "means the science of epidemics—the behavior of disease widespread in a community. The physician concerns himself, as a rule, with the individual patient, the ailment from which he suffers and treatment for it. But the epidemiologist concerns himself with the entire community, both the sick and the well. Health must be regarded from the economic as well as from the humanitarian standpoint. Injury to health means the loss of earning power, hence the loss of prosperity. An entire community as well as the individual, should be relieved of the burden caused by sickness and death; otherwise it cannot compete on equal terms with other communities,

"A country ravaged by malaria, or hookworm infestation, or typhoid fever and lacking adequate means to combat these diseases cannot be as prosperous as the country with the necessary machinery to protect itself. Disease, you know, never stays at home. Poliomyelitis in one country breaks over the borders and sweeps across another. A community prepared to safeguard its citizens with control measures and the means and personnel to carry out these measures can more effectively stamp out the conflagration of an epidemic. The control of contagious and infectious diseases is only one of the advantages which a country thus equipped has. It prepares for war, so to speak, in time of peace; it tries to stop epidemics before they start. Such a country makes an effort to keep the well people well by immunization, sanitation, and education.

"It is for this reason primarily that the Mississippi State Board of Health is working always toward a full-time health department for every country. In the country health department program, special emphasis is placed on the methods and measures which have been proved to be effective in reducing the incidence of disease and raising the general health tone of the people. The program consists mainly of health education, the control of acute communicable diseases, examination of school children, preschool children, and foodhandlers, the enforcement of the regulations governing sanitation, maternal and child health, and other specialized activities such as tuberculosis control.

"More and more," said Dr. Ricks, "the people of the State are realizing that health, within reasonable limits, is a purchaseable commodity and they are willing to pay for efficient health service. In 1917, Harrison County created a full-time county health department which is still in operation. Since that date, this work has gradually grown until, at present, the people of twenty-eight of the eighty-two counties, embracing 51 per cent of the population, are enjoying the benefits of a reasonable adequate local health service. Three new counties have been organized since Jan. 1, 1936—Marshall, Madison, and Jones.

"Epidemiology, the science of epidemics," concluded Dr. Ricks, "is our great weapon in combating disease from the wholesale point of view; and County Health Department, our great safeguard, for the health of entire communities."

Motor vehicle accidental deaths reached 38,500 last year, an increase of fifteen hundred. All accidents 111,000 as compared with 101,139 for 1935. There were four hundred thousand persons permanently disabled, and 103,000 temporarily disabled. So the war of accidents on human life continues to rage. There are many angles to this problem. One of the biggest facts when the real truth is known is alcohol. In our opinion more than half the deaths due to automobile wrecks can be traced to whiskey. There should be a laboratory in every county to make tests for alcohol in the blood. It should be the duty of the officials to see that the blood of every person participating in a car wreck be tested for alcohol in connection of a detailed study of how the accident occurred. It is certain that even a small amount of alcohol in many instances stimulates the "don't care" centers, and increases the weight of the toe on the accelerator. It increases the time of the reflex so that the man driving at forty miles per hour is at a twenty foot disadvantage over the sober one. This human slaughter on the highways that has no respect of person, must be reduced. In this work the medical profession must play an important role. It should have the courage to meet the issue, to help seek out the truth as it is. This machine-age and alcohol are incompatible. Its relation to accidental death should be studied very carefully. Let the truth take its course without the muddling of the waters. Every member of the medical profession should have the courage and the desire to do his part, whether it helps or hinders the social standing of Mr. Alcohol.

Dr. Cohn will address the first quarterly session of the Northeast Mississippi 13-County Medical Society which will convene in Booneville the third Tuesday in March.

The small hospital out on the commercial firing lines is steadily improving its service and proving its worth.

The special Mississippi edition of *The Mississippi Doctor* we expect to come out in April. Put your thinking cap on and let us make it the best this state has yet seen. We want your cooperation.

Last year one hundred and three doctors contributed to *The Mississippi Doctor*. These papers were graduated from the country practitioner to super specialist. With this plan the specialist helps the practitioner and the practitioner helps the specialist and when it is all summed up the people are the beneficiaries.

In the small town a good hospital set with offices for every doctor and dentist connected with a rotating service for the nurses offers many advantages. The office rent helps the hospital and the plan makes the investment more secure for the doctor if he chooses to put up his money.

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The Mississippi Doctor will have plenty of good papers throughout the year. You need not fear this. So send your one dollar right along so you will not miss any copies.

There is a definite relation between the consumption of alcohol and automobile wrecks on the public highways. The medical profession should help to determine this relation.

Hospitals and nurses are very essential, but even so doctors should be allowed to have a little pay occasionally.

The following book reviews, on account of shortage of paper due to the flood, have to be carried over to the next issue:

The Cyclopedia of Medicine—13 volumes with index, edited by George Morris Pierson, M.D., published by F. A. Davis Company.

Medical Morals and Manners by H. A. Royster, M.D., published by University of North Carolina Press. Price $2.50.

Index of Differential Diagnosis by Herbert French, M.D., published by Wm. Wood & Co. Price $16.00.

Proctology by Frank C. Yoemans, M.D., published by D. Appleton-Century Company. Price $10.00.

Textbook of General Surgery by Warren H. Cole and Robert Elman, M.D., published by D. Appleton-Century Co. Price $10.00.

It is with deep regret that we give up the February meeting of the Mid-South Post Graduate Medical Assembly. But we are glad for New Orleans to be able to hold its first Post-Graduate Medical Assembly. It is patterned on the order of the Memphis meeting and will hold its session March 8-11. They have on program such men as John A. Kolmer, G. G. Ward, G. M. Piersol, L. J. Polock, H. J. Stander and Hugh Trout for a single day. No doubt many men in Mississippi will attend this meeting. The annual spring fiesta is to be held at the same time and no doubt many wives will want to go along. New Orleans is a great medical center. It has a fine medical atmosphere. It is rich in history. It is cosmopolitan. This meeting will afford an opportunity for three days of pleasure and profit for both doctor and wife. New Orleans has many medical men of note. It is the home of the Dean of medical world, the medical sage of the ages, Dr. Rudolph Matas. He has the medical soul and the missionary heart and at his instant command more accurate information than any other living man in our opinion. It will be good to breathe the Matas atmosphere for a few days.

We deeply appreciate the new advertisers in this issue. Please take notice of what they say. J. A. Majors Book Company, General Electric X-Ray Corporation, Chappel Laboratories, and Merck & Company, Inc. Other things being equal please trade with the ones who advertise with us.

In this issue please note the exhibitors who were to have been with us. We appreciate their cooperation.

The Mississippi State Medical Association will hold its next annual session in Meridian.

The annual session of the Mississippi State Medical Association for the year 1912 was held in Jackson on April 9th, 10th and 11th.

The invocation was said by Bishop William Mercer Green. The address of welcome was made by Hon. H. M. Quinn, then speaker of the house of representatives. The response was made by Dr. J. G. Gaither, who at the time was connected with the University of Mississippi. Dr. D. J. Williams was the president of the association. His address was, in every way, characteristic of the man. On this address no attempt was made to attain literary perfection or to display oratorical power. But every sentence contained good common sense and pointed out things that needed to be known and done by the membership of the association, if medicine, in Mississippi, was to keep pace with the progress being made elsewhere. However, he congratulated the state in that Mississippi was the first state in the nation to put on a campaign of education on public health and hygiene by providing public lectures on these topics throughout the state. It will be remembered that Dr. Fred J. Mayer was employed to travel the state and deliver lectures to the lay people, in the effort to arouse public interest in health matters. Again he pointed out the fact that Mississippi was the first state in the South that inaugurated a system of vital statistics. This address stands out as one of the most sensible and aggressive presidential pronouncements that I have heard during my time as a member of the association. Organized medicine owes much, in my opinion, to Doctor (Uncle Dan) Williams. I suggest that all, who can, read with care this presidential address. There was nothing spectacular or epoch-making in the program of this session, altho good men had a place on it. Dr. Isadore Dyer and Dr. Frank A. Jones—both now dead— appeared on this program. And when these men addressed an assembly of medical men, something worth while was always said. One thing that might be interesting is that two young men, who were scarcely known to the profession at that time, but who were destined to bulk large in after years, appeared on this program. I refer to Felix J. Underwood and Henry Boswell. I doubt if any two men, now living, have done more than these two have done, to further the cause of preventive medicine in Mississippi. Dr. C. C. Bass of Tulane, himself an ex-Mississippian, had a place on this program also. Dr. A. G. Payne read a very good paper condemning the abuse of the uterine curette. At that time the curette was used routinely and almost daily by most doctors. And naturally a great many pelvic infections followed this reprehensive practice. Dr. Payne's voice was one of the earliest that was raised against it. Dr. Julius Crisler and the writer of these lines discussed the paper to endorse the positions taken by Dr. Payne. It is most gratifying to know that this foolish and perhaps criminal practice rapidly fell into disgrace and disuse after that period in medical history.

Twenty-five years have come and gone since that session of our state association. Much grist has passed through mill during these years and unless one has kept in close touch and has been a close observer, it is hard to realize the marked progress that has been made in the teaching and practice of medicine during this time. There have been both gains and losses. Great gains in methods of precise diagnosis have been evolved. But I fear that we, of today, have lost some of the acumen and fine discriminatory judgment of the older men who have passed from the field since that time. This, I think, is true in both medicine and surgery. Surgical technique is well-nigh perfect. Operations are now undertaken and done that were not dreamed of then. But is it not possible that surgery is becoming more of an art than a science? May it not be that since almost anything can be done without fatal results, that entirely too much unnecessary surgery is done? De we not see people every day that are going through life that are mained and handicapped by reason of the fact that some skillful (but unscientific) surgeon has demonstrated his skill but with dire results to his patient? In the field of medicine changes and advances just as striking as those in the field of surgery have come. And I am convinced that there are others more striking just ahead of us. In the twenty-five years that have just passed, much of the old materia medica has gone into the discard. And justly has it gone. And I venture the prediction that much that is left will soon go, also. A fuller knowledge and understanding of biochemical process must come if medicine is to hold the respect of the world in the future. But it is to be feared that the teaching of the present day, while it is scientific in the extreme, is lacking in that the student is not being taught to consider his patient as an individual and is *not* taught to develop a judgment of his own.

G. S. B.

CHEST DIAGNOSIS

Weller[1] stated in 1929 that carcinoma of the lung represents 10 per cent of all carcinomas, as shown by the review of over 4000

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[1] Weller, C. V.: The Pathology of Certain Signs and Symptoms in Primary Carcinoma of the Lungs, Am. Int. Med., **2**, 725-746 (Feb., 1929)

European and American autopsies. The fact that few of these patients received an antemortem diagnosis of carcinoma reveals the inadequacy of ordinary methods of physical diagnosis, that is, reliance upon the history, percussion note, and auscultation, and flat x-ray films. *More recently the diagnosis of carcinoma has been made frequently upon patients who have been declared tuberculous, or who are told they have bronchitis, asthma, bronchiectasis or "unresolved pneumonia."* Some of these patients have received a diagnosis early enough to permit extirpation of a lobe or lung successfully. A true carcinoma of the bronchus (carcinoma of the lung) does not respond favorably to x-ray or radium treatment.

The modern diagnostic measures which have made the diagnosis of carcinoma of the bronchus possibe have also made possible the differential diagnosis of bronchiectasis, tuberculosis, asthma, lung abscess, foreign body in the bronchus, encapsulated empyema (with or without bronchopleural fistula), lung cysts, sub-diaphragmatic abscess, fungus infections of the bronchi and lungs, varices of the bronchus, aneurysms, papillomas of the bronchus, bronchial atresia, and tumors of the chest wall and mediastinum. Many of these conditions present only "unresolved pneumonia" or bronchitis to regular physical examination and x-rays.

The x-ray is used in several unusual ways. Stereoscopic films reveal much that is missed in flat films. But even more important for fine diagnosis are the lateral and diagonal views, and occasionally those directed in the PA plane with the patient in the lateral recumbent position, or with the feet elevated and the head lowered.

A diagnostic pneumothorax followed by x-ray examinations often differentiates intra- from extra-pulmonary disease and identifies the pathology.

Iodized oil instillations in the bronchial tree reveal dilatations, obstructions, and filling defects in the subsequent x-ray films, as does barium in the intestinal tract. Injected in chest wall sinuses, the oil outlines tracts which lead to the site of the original pathology.

The bronchoscope provides a means of direct inspection of the bronchi for diagnostic purposes, and as in the case of the cystoscope, much can be learned from the character of the mucus membrane, granulation tissues, and location of inflammation even when the pathology is not primary in the bronchus itself. Specimens for culture and biopsies of suspicious tissue are readily removed through the bronchoscope.

With these diagnostic procedures at hand it is possible to find the true pathology in many resistant cases of "asthma", "bronchitis", "unresolved pneumonia", and hemoptysis of unknown origin, to relieve the cause and cure the patient who is otherwise doomed to prolonged unhappy disability or more imminent death. —D. M. C.

ACUTE APPENDICITIS

By Dewell Gann

Any disease practically free of mortality when recognized in its early stages and properly treated, but shows a death rate of eighteen per one hundred thousand should attract our attention regardless of how long or how well we have known it. The leading causes of death except cancer and heart disease are on the decrease but the mortality from appendicitis, one of our oldest and best known surgical diseases is on the increase. The United States leads all other countries in the death rate from acute appendicitis, which equals the combined death rate from ectopic pregnancy, pyosalpinx, gallstones, surgical diseases of the pancreas, spleen and thyroid and approximates that of gastric and duodenal ulcers, gallstones and intestinal obstruction. Appendicitis is taking twenty thousand of our people annually and is the cause of one death every twenty-six minutes, yet when treated promptly and properly we should expect no more than one death in two hundred and forty cases. When operation is delayed and cathartics are given in an effort to obtain relief without operation one in every eleven cases dies. When repeated purgation is practiced one in every four cases dies.

The literature abounds with discussions of the etiology, diagnosis, treatment, and mortality of appendicitis. Municipalities are so concerned over the matter they are publishing facts related to the disease in the lay press and bringing them to the attention of high school students by means of lectures and pamphlets. Philadelphia is taking the lead and other cities are soon to follow. Medical societies should be urged to appoint committees with power to convey to the public the importance of the painful abdomen and the danger of the use of cathartics and enemata.

It should no longer be difficult for us to agree on the best method of handling our part of the situation. In acute appendicitis, pain, followed by nausea, with or without vomiting, tenderness, fever, increases in the pulse rate, and leucocytosis, when in sequence, form the well-known Murphy syndrome.

PAIN

In the absence of concomitant disease pain is the primary and first symptom in acute appendicitis. The invasion of the appendix by the offending organism begins in the mucosa. Like all inflammatory lesions the invasion is accompanied by swelling. The inelastic fibrous coat of the appendix prevents expansion and produces strangulation. Pain and colic are the result. The pain is transmitted through the anterior and lateral cutaneous branches of the peripheral intercostal nerves to the abdominal wall. In the first few hours of the attack the pain is of a diffuse colicky nature spreading over the entire abdomen, but may be epi-gastric, umbilical, or over the appendix whatever its location. Later the pain is localized over the appendix because of extension of the involvement through the walls to the serosal coat and the swelling to the mesoappendix which carries sensory fibers. The parietal peritoneum usually also is involved by this time, and it is much more sensitive to pain than the visceral peritoneum.

NAUSEA AND VOMITING

Nausea and vomiting are reflex symptoms —the result of strangulation of the mucosa. As soon as the mucosa begins to swell, the ileo-cecal valve closes, a reverse peristalsis ensues, and the content of the small bowel is poured into the stomach. The stomach does not tolerate bile unless it has become accustomed to it, and nausea with or without vomiting follows. Vomiting, we think, is of special importance and has a bearing on the gravity of the attack. In fact, practically all cases of appendicitis we operate on show advanced pathology when vomiting has been present.

TENDERNESS

Tenderness, rigidity, and muscular spasm are our most valuable guides in determining the degree of involvement of an affected part. The more extensive the infiltration of the appendix, or the greater the distension of the lumen, the more pronounced the tenderness, rigidity, and the muscular spasm will be. The point of maximum tenderness will be over the appendix wherever it may be.

FEVER

Fever is practically always present in acute appendicitis and varies in the low degrees. It is the manifestation of the absorption of toxic products. Absorption cannot occur until swelling of the mucosa appears; hence, when present it always is indicative of activity. However, after activity has been established, the disappearance of a high fever and leucocyte count may be a good or bad omen. If the appendix is draining into the caput coli, it is good. If the appendiceal artery is blocked, it is bad. A gangrenous appendix does not always give pain and never absorbs toxins; hence, fever and leucocytosis may temporarily disappear only to be followed in a few hours by leakage or perforation accompanied by a spreading peritonitis.

On the other hand, when invaded by certains strains of streptococci, the temperature elevation may far exceed that of an ordinary case. It is in this type of infection involving the appendix that the differential diagnosis may become pre-eminently difficult.

When toxins are present in the appendix without absorption and the case appears in the afebrile state, one must rely principally on our old friends — pain, tenderness, and muscular rigidity for guidance.

Chills occur with the fever only when the involving organisms and their products, or both, are thrown into the blood stream in large quanities, sometimes almost overwhelming the patient.

BLOOD COUNT

The total leucocyte count is a valuable aid in establishing a diagnosis, and the polys are most helpful in determining the resistance of the patient shown toward the invading organism. However, in a frank case of acute appendicitis the practice of sending a technician to the home for a blood count is a bad one. The history and physical findings must be the factor in the main decision—the advisability of operation. The delay brought about by this practice is not only unnecessary, but may be a contributing factor to a mortality.

Deaths from appendicitis in the United States should not lead all other countries. Let's give it more careful consideration.

APPROVED HOSPITALS: AN APPRECIATION

By R. L. SANDERS, M.D., F.A.C.S.
Memphis, Tenn.

The world owes a debt of gratitude to Florence Nightingale, who, nearly a century ago, blazed the trail for organized hospital service as it is known today. Surely, she was a Moses born in due time to lead the world into a newer light. The impulse to nurse the sick back to health, happiness and usefulness must have been inspired in her by a mighty force commensurate with the needs of her time. Yet, even though brilliant and far-seeing, it is improbable that she ever dreamed of starting a humanitarian movement which would soon become the eighth largest enterprise in the world. From the standpoint of capital invested, people employed, money spent, and patients treated, hospital service now makes its place alongside big business.

Modern hospital service has been the strong ally of medicine and surgery in advancing civilization. The public attitude has been altered to keep pace with this growing influence. In former days, the very mention of a hospital brought to the minds of the people gruesome pictures of suffering and death. Infection and gangrene were expected and all too frequently became realities. Fortunately, that situation has been changed and we are today living in a new era. Order has been brought out of chaos; peace and tranquillity supplant horror and fear when patients contemplate enforced hospitalization, whether for a minor or serious illness. Instead of last resorts, hospitals are now regarded as havens of refuge for the sick and injured, and are even sought by those in need of nothing more than a rest cure. Modern surgery has tempered the hazards of appendicitis, pelvic disease, stomach and gallbladder affections, intracranial and intrathoracic complaints, and, with the aid of its handmaiden, efficient hospital service, has favorably influenced the mortality rate and thus assisted in lengthening the span of life.

During the developmental period, each hospital of necessity set its own standards of service. No common basis of operation had been worked out for all institutions. To meet this need, however, a few years ago the American College of Surgeons devised and established a minimum standard of hospital requirements, and for those institutions coined the term, "Approved Hospital." External appearances of buildings, marble walls and stairs, drapes and furnishings inside, play only a small part in earning this certificate of approval. A high quality of service constantly rendered by men and women who help to make such institutions safe places for the sick and helpless is the yardstick of measurement. Equipment though necessary and useful, cannot take the place of trained minds, trained hands, and sympathetic hearts in caring for suffering patients. Incidentally, the plan of theCollege of Surgeons has also been helpful in standardizing the activities of the surgeons who work in the hospitals. Though far from being complete, their program of standardization has been of inestimable value in assisting hospitals to meet minimum standards. Their efforts have certainly been made along proper lines and deserve our whole-hearted recognition and commendation.

It is true that many hospitals doing excellent work have met the minimum standard, nor is it possible for everyone to do so on account of financial conditions and the limited number of men who compose the staff. However, a huge army of men and women all over this country are achieving splendid results in caring for the sick of their communities in institutions which have not been able to meet the minimum standards and are not privileged to use the word, "Approved."

And now we need another Moses! The people have been educated to appreciate the advantages of hospitalization when in need of treatment, and more and more they are seeking hospital rooms and wards where they can obtain safe and efficient care. Unfortunately, many of them cannot afford to pay the cost. Something must be done in the near future, therefore, to bring adequate hospital service within the means of the average patient. Will the prepayment insurance plan, as used in our present hospitalization program meet the requirements? I do not know. Will the tax payer shoulder the burden and allow certain delegated individuals to distribute properly the money whereby patients may secure treatment without fear of favor or political intrigue? I do not know. Surely, another Moses is needed now as badly as a century ago, when the light first dawned in the mind and heart of Florence Nightingale.

DEFORMITIES TOO FREQUENTLY OVERLOOKED

What do you tell the patient who asks you about having a disfigurement corrected? If he has a very extensive scar contracture of the face, neck or hands, resulting from a burn or an automobile accident, or a congenital deformity, such as a hare-lip, you would probably refer him immediately to some competent plastic surgeon. But what do you do about the patient with the less noticeable abnormalities?

It should be remembered that the severity or extensiveness of the abnormality may not be the indication for a plastic operation, but how bad it is in the patient's own mind. The correction of a very slight irregularity of the nose or the removal of a scar on the face, which the casual observer probably would never notice, may change a patient's whole out-look on life.

Many people have mental, emotional or personality complexes which may be traced directly to the results of some abnormality which they have been sensitive and self-conscious about for many years. There's practically no one with a disfigurement but who would like to and would have it corrected, if he knew to whom to go where such could be satisfactorily done. Some of them give a history dating back to early childhood when they first noticed there was a difference in them from other children. For this reason, it is the duty of every physician to ever be on the alert to advise the parents of a child with any abnormality, whether congenital or acquired—be it ever so slight—to have it corrected as early as possible.

W. M. ADAMS.

HEALTH EDUCATION IN MISSISSIPPI

Of course, no doctor needs to be told what health education is. It is a part of his life job. Doctors and nurses are our prime health educators. Long before the tumult and the shouting started concerning this important trend in health work, they were trying to instruct people how to take care of themselves, how to keep from being sick, how to stay well. They have patiently taught everything from the importance of infant care and maternal hygiene to the reason why Johnny shouldn't eat green apples or drink spring water.

Many people understand *that* kind of health education; they call it common sense. And so it is! But health education from an organized point of view seems to confuse the average person. Such terms as *aeronautical engineering* or *social security* leave them apparently less bewildered. What they don't realize is that organized health education is very much the same sort of thing which the doctor and nurse have been trying to give them all these years. The chief difference is that departments of health and education are back of this teaching, now. We are attempting wholesale as well as retail teaching where formerly, of necessity, it had to be given in a retail manner only.

Times have changed. The family doctor doesn't know as much about us as he used to. The Dimbitskys, the Santiagos, and the Gruens have moved into the neighborhood from the far corners of the earth; many of the Smiths and Browns have gone away. The doctor has a car, a wide territory to cover, and consequently less time to give each individual. He rarely spends the night anymore even if Susan is threatened with croup. He has had the child immunized from diphtheria, he leaves careful instructions, and speeds toward the family twenty miles away where a baby is expected. We take our toes to one specialist, our ears to another, and our arthritis to another. Once upon a time the family doctor sufficed for all these needs.

These days, however, we have to find our way through a new technology of production, new methods of distribution, commercialization of all relations, and a high-pressure salesmanship. Nevertheless, through all this smoke screen of ideas and machine gun barrage of new facts, we must bring to the public attention factual information in such a manner as to produce favorable action. A well-organized health education program is essential. The major purposes are: to make health information public in such a manner as to stimulate interest and favorable changes of attitudes toward healthful living; to give the members of a community an understanding of the work of the health department, its functions, responsibilities, services, and policies; and to secure community participation in public health work, their good-will, and financial support.

A comprehensive health education program includes three phases: popular health instruction; health education for the professional groups; and school health education. The final responsibility for community health education rests with the health officer or someone selected by him. Nevertheless for such a program to be successful, it must be promoted not by one organization but by many, both official and otherwise, and by individuals capable of leadership. It must have the active co-operation of influential persons, of local and state-wide social, civic, and religious groups. To further health educational activities, a close relationship must be maintained with the various state departments, the State Medical, Dental, Nurses' and other associations, physicians, and dentists in private practice, nurses, teachers, social and welfare workers.

Mississippi has achieved a high place in public health work but to keep popular opinion in step with the expanding health program, health instruction on a wide scale must be inaugurated. We are depending on the doctors, our prime health educators, to help us in our wholesale teaching of Johnny and Susan and all their folks.

F. J. U.

Dr. R. L. Haden

Cleveland, Ohio

Medical educator, b. Palmyra, Va., May 22, 1888; s. Clifton James and Nicie Delima (Landram) H.; A.B., U. of Va., 1910, A. M. 1911; M.D., Johns Hopkins, 1915; m. Isabel McLeod Smith, of Norfolk, Virginia, October 6, 1917; children—Russell Landram, James Coke. Resident house officer, Johns Hopkins Hosp., 1915-16; asst. resident physician, Henry Ford Hosp., Detroit, Mich., 1916-17; dir. of labs., same hosp., 1917-18, 1919-21; assoc. prof. medicine, U. of Kan., 1921-23, prof. exptl. medicine 1923-30; head of dept. medicine, Cleveland (Ohio) Clinic, since 1930. First Lt. Med. Corps, U.S.A., Asst. chief med. service base hosp., Camp Lee, Va., 1918-19. Mem. A. M. A., Am. Assn. Pathology and Bacteriology, Am. Soc. for Clin. Investigation. Am. Clin. and Climatol. Assn., Assn. Am. Physicians, Phi Beta Kappa, Sigma XI, Theta Delta Chi, Nu Sigma Nu, Alpha Omega Alpha, Pithotomy Club. Democrat. Methodist. Author: Clinical Laboratory Methods, 1923; Dental Infection and Systemic Disease, 1928. Awarded gold medal by Radiol. Soc. America for contributions to dental roentgenology, 1929. Contbr. on diseases of the blood, focal infection and intestinal obstruction. Home: 2673 N. Park Boul. Office: Cleveland Clinic, Cleveland, Ohio.

Address: "The Treatment of Anemia." 11:00 a. m. Friday, Feb. 19.

Dr. Fredrick A. Willius

Rochester, Minn.

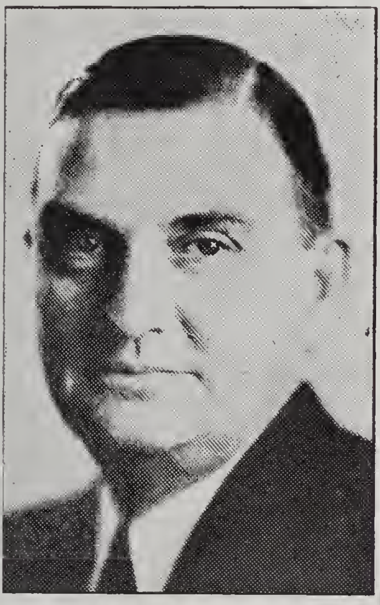
Dr. Willius was born Nov. 24, 1888, at St. Paul, Minn. He received the degrees of B.S., M.D., and M.S. in Medicine from the University of Minnesota. He entered The Mayo Clinic as an assistant in general diagnosis and electrocardiography in 1915, and is now head of the section on Cardiology. He is a fellow of the American College of Physicians, and a member of the American Medical Association, the American Congress of Internal Medicine, the American Heart Association, the Minnesota Heart Association (president in 1925), and the Central Society for Clinical Research.

He is also a member of Phi Rho Sigma and Sigma Xi.

Address: "Cardio-vascular Syphilis." 4:00 p. m. Thursday, Feb. 18.

Dr. T. G. Orr

Kansas City, Mo.



Professor of Surgery, University of Kansas, and Surgeon-in-Chief to the University of Kansas Hospitals, Kansas City, Mo.

Address: "Chronic Disease of the Gall Bladder." 11:00 a. m. Thursday, Feb. 18.

Dr. J. C. Meakins

Montreal, Canada

Professor of Medicine and Director of the Department McGill University, Montreal.

Physician-in-Chief and Director of the University Clinic for Medical Research, Royal Victoria Hospital, Montreal.

Fellow of the American College of Physicians.

Fellow of the Royal Colleges of Physicians of Canada, of Edinburgh, and of London, England.

Honorary Fellow of the Royal College of Surgeons, Edinburgh.

Fellow of the Royal Society of Canada, and of Edinburgh.

Member of the Association of American Physicians.

Member and past President of the Canadian Medical Association.

Member of the British Medical Association.

Address: "The Treatment of Lobar Pneumonia." 8:00 p. m. Tuesday,Feb. 16.

Dr. A. C. Ivy

Chicago, Ill.

Andrew Conway Ivy, born in Farmington, Mo., February 25, 1893. B. Pd. and A. B. degrees were received from the Cape Girardeau State Teachers College in 1913. While attending the Teachers College, Dr. Ivy received the class medal in oratory, and was a member of the debating society, the football, baseball, track and wrestling teams.

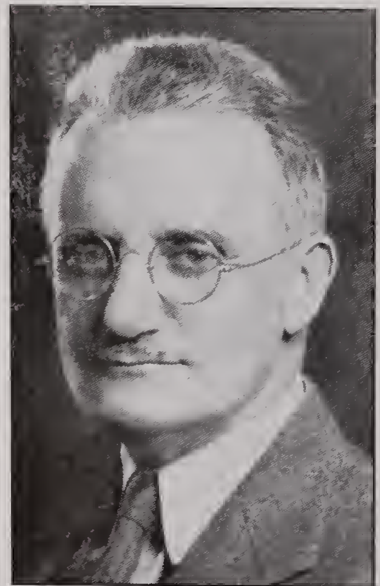
He attended Rush Medical College where he obtained his M. D. degree and was an instructor in the Physiology Department of the University of Chicago where he received the M. S. and the Ph. D. degrees. In October, 1919, he went to Loyola University Medical

School as Associate Professor of Physiology. In 1923 he accepted an appointment as Associate Professor of Physiology at the University of Chicago and in October, 1925, he became the Nathan Smith Davis Professor of Physiology and Head of the Department of Physiology and Pharmacology of the Northwestern University Medical School. Dr. Ivy is the author of over 100 articles on the physiology of the gastro-intestinal tract, hormones, brain, etc. Dr. Ivy is widely known both in the United States and abroad as a physiologist, and every year gives lectures in many of the larger cities of the United States. He is a member of the following organizations: Mason, Alpha Kappa Medical fraternity and advisor of Xi Chapter, Sigma Xi, Alpha Omega Alpha, secretary of the American Physiological Society, Who's Who, Assa "starred" member of the American Association for the Advancement of Science, the American Medical Association, a Fellow of the American College of Physicians, a member of University Professors, and chairman of the section on Physiology and Pathology of the American Medical Association.

Address: "The Etiologic and Symptomatic Significance of Mal-function of the Sphincter of Oddi." 10:00 a. m. Thursday, Feb. 18.

Dr. C. H. Crego, Jr.

St. Louis, Mo.



Received medical degree from the University of Michigan with the class of 1923. Was on the surgical service at the University Hospital, Ann Arbor, Michigan, from 1923 to 1925. Resident Surgeon at Shriners' Hospital for Chippled Children, St. Louis, 1925 to 1927. Assistant Surgeon Shriners' Hospital for Children, St Louis, 1927 to 1930 Appointed Chief Surgeon, Shriners' Hospital for Crippled Children, St. Louis, 1930. Also Assistant Professor of Clinical Orthopedics at Washington University School of Medicine, St. Louis.

Address: "The Orthopedic Treatment of Poliomyelitis." 4:00 p. m. Tuesday, Feb. 16.

Dr. L. A. Buie

Rochester, Minn.

Louis Arthur Buie, B.A., M.D., Chief of the Department of Proctology in the Mayo Clinic. Professor of Surgery of the Mayo Foundation--University of Minnesota.

Fellow of the American Proctologic Society.

Fellow of the American College of Surgeons.

President of the American Proctologic Society 1927-28 and 1934-35.

Author of book entitled "Proctoscopic Examination and the Treatment of Hemorrhoids and Anal Pruritus."

Author of book (with Rankin and Bargen) entitled "Colon, Rectum, and Anus."

Just completed (not published) book dealing with surgery and diagnosis of disease of the anus and rectum.

Address: "Diseases of the Anus and Rectum: Diagnostic and Therapeutic Aspects." 11:00 a. m. Tuesday, Feb. 16.

Dr. S. D. Kramer
Brooklyn, N. Y.

Dr. Kramer was admitted to the degrees of B. S. by the College of the City of New York, 1919; M. D. by the College of Physicians and Surgeons of Columbia University in 1920; internal at the Lenox Hill Hospital and resident at the Hebrew Infant Asylum of New York. from 1920 to 1923; and practiced Pediatrics for a number of years in Brooklyn, New York.

He attended Massachusetts Institute of Technology in the year 1927 and obtained the degree of Doctor of Philosophy in 1929; the subject of the thesis being "Rheumatic Fever." He was appointed a member of the staff of the Harvard Infantile Paralysis Commission from 1928 to 1932, and throughout his stay in Boston, acted as a Member of the Staff of the Children's Hospital.

In 1932, The Long Island College of Medicine of Brooklyn, New York, invited Dr. Kramer to carry on his researches in infantile paralysis at that institution. The Infantile Paralysis Commission of the Long Island College of Medicine was then organized and Dr. Kramer was appointed and has acted as Director of this Commission up to the present time.

He is at this writing Assistant Professor in Pediatric Research and Director of Infantile Paralysis Research at the Long Island College of Medicine; Associate Attending in Pediatric Research at the Jewish Hospital; and Attending Pediatrician at the Trinity Hospital in Brooklyn, New York. His contributions to the literature are numerous, and he has exhibited and addressed many medical organizations on poliomyelitis.

Address: "An Evaluation of a Number of Procedures Recommended for the Prevention of Poliomyelitis." 3:00 p. m. Tuesday, Feb. 16.

Dr. Geo. W. Kosmak
New York, N. Y.

Editor and Founder of the American Journa of Obstetrics and Gynecology.

Consultant in Obstetrics, New York State Department of Health.

Consultant, Federal Children's Bureau, Washington, D. C.

Attending Surgeon, New York Lying-In Hospital, 1905-1926.

Chairman, Medical Board, Maternity Center Association, New York City.

Consultant in Obstetrics, several New York Hospitals.

Secretary, Advisory Obstetrics Council, New York Department of Health.

Vice-President, American Gynecological Society.

Fellow, American Association of Obstetrics and Gynecologists.

Fellow, American College of Surgeons.

Author:— Monograph, Toxemias of Pregnancy, D. Appleton and Co., 1923.

Many contributions to obstetrical literature.

Address: "The Favorable and Unfavorable Results from the Practice of Certain Modern Obstetric Trends and Procedures." 2:00 p. m. Friday, Feb. 19.

Dr. Hugh Cabot

Rochester, Minn.

Born at Beverly Farms, Massachusetts, August 11, 1872. He has had the following degrees, position and appointments:

A. B., Harvard, 1894.

M. D., Harvard, 1898.

LL.D., Queen's (Ireland), 1925.

Visiting surgeon, New England Baptist Hospital, 1900-20.

Surgeon, out-patient department, Massachusetts General Hospital, 1904-10.

Instructor genito-urinary surgery, Harvard Medical School, 1910-12.

Chief genito-urinary department, Massachusetts General Hospital, 1910-19.

Assistant Professor genito-urinary surgery, Harvard Medical School, 1913-18.

Professor genito-urinary surgery, Harvard Medical School, 1918-19.

Surgeon, University of Michigan Medical School, 1919-1930.

Dean of University of Michigan Medical School, 1921-30.

Professor of surgery, University of Minnesota Graduate School, 1930.

Surgeon, Mayo Clinic, 1930.

Chief Surgeon, Harvard Unit, B. E. F., 1916-17, commanding officer, 1917-18.

Surg. Asn. Genito-Urinary Surg. (president, 1917).

American College of Surgeons.

American Medical Association.

Urological Association (president, 1910-12).

Association of American Medical Colleges (president, 1925-27: Mississippi Valley Medical Association, president, 1915.

Association Internationale d'Urologic.

American Surgical Association.

Member Board of Overseers, Harvard College, 1929-35.

Address: "Our Present Knowledge of the Pathogenesis of Renal Calculus." 11:00 a. m. Wednesday, Feb. 17.

Dr. A. F. Hartmann

St. Louis, Mo.

Professor of Pediatrics Washington University School of Medicine.

Physician-in-Chief St. Louis Children's Hospital.

Born October 30, 1898, St. Louis, Mo.

Degrees: B.S. Washington University 1919, M.S. Washington University 1921, M.D. Washington University School of Medicine 1921.

Internship: St. Louis Children's Hospital 1921-22; Assistant Resident, St. Louis Children's Hospital 1922-23; Resident, St. Louis Children's Hospital 1923-24.

Teaching Appointments: Instructor in Pediatrics, Washington University School of Medicine 1923-25; Assistant Professor Pediatrics, Washington University School of Medicine 1925-27; Associate Professor Pediatrics, Washington University School of Medicine 1927-36; Professor Pediatrics, Washington University School of Medicine 1936.

Address: "Some Aspects of Diabetes Mellitus in Infants and Children." 9:00 a. m. Thursday, Feb. 18.

Dr. E. L. King

New Orleans, La.

Born in Mound, La.
Educated Public Schools New Orleans, La.
A. B. Degree, Tulane University, 1906.
M.D., Degree, Tulane University, 1911.
Interned Charity Hospital 1909-11.

Resident Physician Presbyterian Hospital 1911-12.

Joined teaching staff, Tulane University 1914, with rank of Instructor in Obstetrics, and Gynecology, later promoted to Assistant Professor then Asso. Professor of Obstetrics, and in 1928 Professor of Obstetrics and Head of the Department.

1918-19 served in the World War in France, with the rank of Captain, in the Evacuation Hospital No. 31.

1930 conducted a course of lectures on obtetrics in Oklahoma, under the auspices of the Univesity of Oklahoma.

1935, course of lectures at the University of Florida, as part of a special week of instruction for practitioners of Florida.

Member of the White House Congress on Child Health and Protection (President Hoover.)

Chairman of the Materman Welfare Committee of the Louisiana State Medical Society.

Member of the following Medical Organizations: Orleans Parish Medical Society, President in 1933. New Orleans Gynecological and Obstetrical Society. Louisiana State Medical Society. American Medical Association. Southern Medical Association. American College of Surgeons. American Gynecological Society. American Association of Obstetrics and Gynecology. Central Association of Obstetricians and Gynecologists. Licentiate of the American Board of Obstetricians and Gynecologists.

Address: "Some of the Common Complications in Pregnancy and Labor." 10:00 a. m. Tuesday, Feb. 16.

Dr. Floyd E. Keene

Baltimore, Md.

Born in Kewanee, Illinois, October 9, 1881. Graduated from the University of Pennsylvania Medical School in 1904. Post-graduate study in Berlin and Vienna. William Goodell, Professor of Gynecology, University of Pennsylvania, since 1927. Gynecologist to the Hospital of the University of Pennsylvania. Consulting gynecologist to the Chestnut Hill, Bryn Mawr and Abington Memorial Hospitals. Member of the American Medical Association, American College of Surgeons, American Gynecological Society (President, 1933), American Gynecological Club, Surgical Research Society, College of Physicians of Philadelphia, Obstetrical Society of Philadelphia (President, 1934), Philadelphia Academy of Surgery, and Philadelphia Pathological Society.

Address: "The Treatment of Uterine Myomata." 3:00 p. m. Friday, Feb. 19.

Dr. J. H. Hutton

Chicago, Ill.

Member Chicago Medical Society, Illinois State Medical Society, A. M. A., Assoc. for Study of Internal Secretions, American Assoc. for Advancement of Science, Amer. Editors and Author Assoc.; fellow Amer. College of Surgeons.

From 1927 to 1931 was secretary, president-elect and president of the Chicago Medical Society, for many years was a member of the Council of the Chicago Medical Society. Helped to organize and for ten years was chairman of the Scientific Service Committee of the Illinois State Medical Society. In 1930 was appointed consulting endocrinologist to the Illinois Central Railroad, the first appointment of its kind ever made.

In 1933 Dr. Hutton announced his disbelief in the pancreatic theory of diabetes and his idea that this condition was due more to hyperfunction of the pituitary and adrenals than it was to hypofunction of the pancreas; that essential hypertension was due in many instances to the same thing; and that in many cases both conditions should be relieved by low dosage of irradiation to the pituitary and adrenals. This idea has been followed ever since with some degree of success, particularly in hypertension.

Address: "Recent Advances in Endocrine Diagnosis and Therapy of Interest to the Man in General Medicine." 10:00 a.m. Wednesday, Feb. 17.

Dr. Mont R. Reid

Cincinnati, Ohio

Born in Oriskany, Va., April 7, 1889; s. Benjamin Watson and Harriet Pendleton (Lemon) R.; student Daleville (Va.) Normal School., 1902-04; A. B., Roanoke, Coll., Salem, Va., 1908; M.D., Johns Hopkins, 1912; m. Elizabeth Harmon Cassatt, Jan. 26, 1929; 1st son, Alfred Cassatt. Interne Johns Hopkins Hospital., Baltimore, Md., 1912-13;Asst. resident pathologist, 1913-14, resident surgeon, 1914-18, resident surgeon, 1918-21, assoc. surgeon, 1921-22; instr. in surgery, 1914-18, asso. in surgery, 1918-22; asso. prof. surgery, U. of Cincinnati, 1922-31, prof. since 1931; visiting prof. surgery, Peking (now Peiking, China) Union Medical College., 1925-26; dir, surg. service Cincinnati General Hospital, Children's Hospital. Served as 1st Lieut in Medical Corps, U. S. A., World War. Mem. A. M. A., Am. Surg. Assn., Southern Surg. Soc., Interant Surg. Assn., Clin. Surgery, A. A. A. S., 2d Vice-President, Amer. Surg. Asso. June, 1934. Matas Medal, Jan. 23, 1934. Honorary member of Academy of Surgery of Detroit, May 28, 1935.

Phi Chi Alpha. Republican. Presbyterian. Clubs: University, Camargo, Cincinnati Country. Contrib. Chapter on Surgery of Sympathetic Nervous System, Dean Lewis System of Surgery, 1929; also contrib. to Journ. Exptl. Medicine, Bulls. of Johns Hopkins Hosp., Trans. Southern Surg. Ann., Jour. A. M. A., Jour. of Medicine, etc.

Address: "The Treatment of Wounds." 9:00 p. m. Tuesday, Feb. 16.

Dr. A. G. Mitchell

Cincinnati, Ohio

Born in Salem, Mass., February 22, 1889; s. Fred Albert and Marie (Graham) M.; graduated Central High School., Philadelphia, Pa.,;M. D. U. of Pa., 1910; m. Adele Wentz, of Philadelphia, Oct. 2, 1912; asst, pediatrician, Children's Hospital., Phila., 1912; instr. in pediatrics, U. of Pa., 1919-21; asso. in pediatrics, 1921-24; prof. pediatrics, U. of Cincinnati (O.), since 1924; director pediatrics and contagious diseases, Cincinnati Gen. Hosp.; chief of staff and med. dir. Children's Hosp. Cincinnati; director Children's Hospital Research Foundation. Served as Lieut., later Capt., Med. Corps, U. S. A., med dir. Am, Hosp for Civilians, Neufchateau, France, later with 149th Machine Gun Bn., World War. Med. dir. Babies Milk Fund Assn. of Cincinnati; mem. White House Conference on Child Care. Chmn. Sect. on Pediatric of Am. Med. Assn., 1935; mem. American Pediatric Soc., (chmn. of Council 1935), Central States Pediatric Soc., Central Soc. Clin. Research, Soc., Pediatric Research, Am. Acad. Pediatrics, Sigma XI, Alpha Omega Alpha, Alpha Mu Pi Omega; fellow A. A. A. S. Republican. Presbyterian. Club: University. Co-Author: (with J. P. C. Griffith) Diseases of Infants and Children (2 vols.,) 1927, (1 vol.)' 1933. Pediatric editor The Cyclopedia of Medicine. Contbr. Jour. A. M. A., Am. Jour. Diseases of Children, Archieves of Pediatrics, Jour. of Pediatrics, etc.

Address: "Commonplace Endocrine Problems of Childhood." 9:00 a. m. Wednesday, Feb. 17.

Dr. Cyrus C. Sturgis

Ann Arbor, Mich.

Born in Pendleton, Oregon. B. S. University of Washington; M.D. Johns Hopkins University, 1917. Medical House Officer Peter Bent Brigham Hospital 1917-18; First Lieut. Medical Corps U. S. Army 1918-19.; Assistant Resident Physicion, Peter Bent Brigham Hospital 1919-20; Resident Physician Peter Bent Brigham Hospital 1920-22; Teaching Fellow in Medicine, Harvard Medical School 1920-22; Faculty Instructor in Medicine, Harvard Medical School 1922-25; Associate Physician, Collins P. Huntington Memorial Hospital 1925-26; Assistant Professor of Medicine, Harvard Medical School 1925-27; Physician Peter Bent Brigham Hospital 1925-27.

Present positions: Professor of Medicine, University of Michigan Medical School; Director, Thomas Henry Simpson Memorial Institute for Medical Research: Director, Department of Internal Medicine, University Hospital.

Society memberships: Association of American Physicians, American College of Physicians, American Society for Clinical Investgation, Central Society for Clinical Research, American Association for the Advancement of Science and American Clinical and Climatological Association.

Address: "Some Recent Advances in the Field of Hematology." 3:00 p. m. Wednesday, Feb. 17.

Dr. E. R. Long
Philadelphia, Pa.

Esmond R. Long, M.D., *Director of Henry Phipps Institute for the Study, Treatment and Prevention of Tubercolosis and Professor of Pathology, School of Medicine, University of Pennsylvania, Philadelphia, Pa.* Born in Chicago, June 16, 1890. Graduate and Doctor of Philosophy, University of Chicago. M.D. from Rush Medical College, Chicago. Graduate studies in pathology of tuberculosis, German University of Prague. Faculty of Department of Pathology, University of Chicago 1919-32. Special work in Carnegie Institution of Washington and Saranac Laboratory, New York. Member of various medical and special pathological societies, including American Medical Association, Association of American Physicians, Institute of Medicine of Chicago, College of Physicians of Philadelphia, American Association of Pathologists and Bacteriologists, etc. Author of works on pathology and tuberculosis. Member of Board of Directors of the National Tuberculosis Association for past seven years. Particularly associated with Committee on Medical Research of National Tuberculosis Association. At present President of National Tuberculosis Association. Concerned especially in research on pathology of tuberculosis, case finding methods in tuberculosis, and improvement of the tuberculin test. Awarded Trudeau Medal of the National Tuberculosis Association in 1932.

Address: "Types of Pulmonary Tuberculosis and Factors in Spread of the Disease." 9:00 a. m. Friday, 19.

Dr. H. B. Stone
Baltimore, Md.

The following record is evidence of Dr. Stone's superior fitness. He received his B. A. degree from Johns Hopkins University in 1902, his M.D. from the same institution in 1906 and then came the following appointments: Resident House Officer in Surgery at the Johns Hopkins 1906-07, Adjunct Professor of Surgery at the University of Virginia 1907-10. In 1910 he returned to Baltimore and since then has filled various grades in the surgical staff at the Johns Hopkins Hospital and Associate Professor of Surgery in the Medical School. He is also serving on the medical staff of the following hospitals: Union Memorial, Church Home and Infirmary, Women's Hospital and others. He holds membership in the following medical societies: The American Medical Association, the American College of Surgeons, the International Surgical Society, the American Surgical Association, the Southern Surgical Association (President this year), the American Society of Clinical Surgery, the Surgical Research Society. For the last twenty-five years he has written fifty publications or more on the majority covering some aspect of gastro-intestinal surgery, much of it experimental and dealing with the endocrine glands. Among other publications is the monograph on "Hernia in Lewis's System of Surgery." Surgeons of the Mid-South certainly have something to look forward to in his appearance at the Mid-South.

Address: "Intestinal Obstruction." 4:00 p. m. Wednesday, Feb. 17.

Dr. Gabriel Tucker

Philadelphia, Pa.

Prof. Bronchoscopy and Laryngeal Surg., Univ. Penn., Philadelphia, Pa.

Address: "Cancer of the Larynx; Its Management and Its Relation to Benign Tumors of the Larynx." 2:00 p. m. Wednesday, Feb. 17.

Dr. E. M. Seydell

Wichita, Kansas

Doctor E. M. Seydell, Witchita, Kansas. Dr. Seydell graduated in medicine from Northwestern University, Medical School in 1909. He is the Otolaryngologist at Wesley and St. Francis Hospitals, Wichita, Kan., a member of American Laryngological Association, on the American Otological Society, American Laryngological and Otological Society, American Academy of Ophthalmology and Otolaryngology, Fellow of the American College of Surgeons. He has written some forty-odd articles on otolaryngology. He recently assisted with the Annual Post-Graduate Assembly at Houston, Texas, after which he and Mrs. Seydell spent some time visiting in Mexico. Men interested in his field of work will look forward with pleasure and profit to his coming to the Mid-South.

Address: Acute Mastoiditis." 2:00 p. m. Tuesday, Feb. 16.

Dr. R. Castroviejo

New York, N. Y.

Born in Spain in 1904 and was graduated from the Medical School of the University of Madrid in January of 1927. Practiced there with father, who was an ophthalmologist. Came to the United States in October of 1928. For two years was with the Chicago Eye, Ear, Nose, and Throat Hospital. Afterwards spent one year at the Mayo Clinic doing research work. For the past five years has been connected with the Institute of Ophthalmology--Columbia Presbyterian Medical Center.

Research Fellow of Columbia University,

Attending Ophthalmologist of the Vanderbilt Clinic and Assistant Surgeon at the Institute of Ophthamology — Columbia Presbyterian Medical Center.

Address: "Surgery of the Cornea." 10:00 a. m. Triday, Feb. 19.

Dr. H. C. Solomon

Boston, Mass.

b. Hastings, Neb. Oct. 25, 1889; B.S. U. of California; M.D. Harvard, 1934; ass't. prof. phychiatry Harvard Med. School since 1927; Chief of Therapeutic Research, Boston Phychopathic Hosp. Neurologist Beth Israel Hosp.; Ass't. Neurologist Mass. Gen. Hosp.; Member Advisory Committee Dept. of Public Welfare of Commonwealth of Mass.; Member American Neurol. Ass'n., Boston Soc. Neurology and Psychiatry (Pres. 1928-29) American Psychopathol Ass'n. Am. Ass'n. Pathologists and Bacteriologists Greater Boston Med. So. (ex-pres.) Sigma Xi; Phi Delta Epsilon. Author: Neurosyphilis (with Elmer E. Southard) 1918; Syphilis of the Innocent, 1922. Off: 270 Commonwealth Ave., Boston, Mass.

Address: "The Treatment of Syphilis of the Central Nervous System." 300 p. m. Thursday, Feb. 18.

Our state is now quite well supplied with hospitals, but a thousand more registered nurses in better equiped offices could be used to a big advantage of the doctor and the people.

Dr. J. E. Moore

Baltimore, Md.

Address: "Public Health Implications of the Treatment of Syphilis." 2:00 p. m. Thursday, Feb. 18.

BOOK REVIEW

Endocrinology in Modern Practice, written by William Wolfe,M.D., M.S., Ph. D., and just published by W. B. Saunders Company, is certainly a wonderfully interesting and a most helpful book. Endocrinology no doubt holds the key to many conditions in medicine met by every practitioner every day and heretofore not understood. Dr. Wolfe brings the information on this subject up to the last minute. He avoids technicalities and deals with the subject in a comprehensive and an authoritative manner. The text is arranged to provide the practitioner with full and usable knowledge of clinical endocrinology. The plan of the book is to discuss each gland with its more important inter-relationships with other endocrines. One of the main objects of the book is to get the entire medical profession to think in terms of endocrinology. Hence the author discusses at length the relation of this subject to the different specialities. Menstrual disorders, pregnancy, the menopause, obseity and sterility are given full discussion in this plan. A third section of the book is devoted to problems of diagnosis. The type of history needed for this purpose is indicated. A plan for making physical examinations including special procedures such as anthropometry are included which are most helpful. In chapter thirty-one laboratory findings are discussed in a most helpful manner. Glandular therapy is discussed at length including the plan of selection and mode of administration.

Summaries appear at the end of each chapter to make possible a quick review. In the special chapters the text is arranged to point out the endocrine phase of the special syndromes, in the summaries the special syndrome are listed under each endocrinopathy involved.

Every practitioner will find this book of great interest and of much practical value. It is published by the W. B. Saunders Company. The price is ten dollars.

Textbook of Surgery by Frederick Christopher, B.S., M.D., F.A.C.S.

Probably no textbook in surgery offers such a wide collection of prominent surgeon authors as does this book. Almost 200 of the most prominent surgeons of this era are quoted. Thus Dr. Christopher has edited a book that offers the most recent and authorative work in surgery. With so many recent advances in different branches of surgery no one person could have had experience in or could be acquainted with such a collection of knowledge. Most all of these authors are actively engaged in teaching surgery to medical students. Naturally this material will be found compiled in such a manner that it will be interesting and instructive to students. The general practitioner could hardly find a more useful book on surgery than this.

This book is published by the W. B. Saunders Company, Philadelphia and London. Price—$10.00.

A Diebetic Manual by Edward L. Barty, M.D.

Published by F. A. Davis Company of Philadelphia. Price, two dollars.

This book is a most valuable one in giving both doctor and patient an intelligent understanding of the cause, nature, diagnosis and treatment of diabetes. The style is clear and straightforward. It is written in terms that the laity can understand. An outstanding feature of the book is the utilization of special information of many able men. Dr. Rappapart has a fine chapter on the care of the feet. Dr. J. Montgomery Deaver, on surgery; diabetes in children is discussed by Dr. Walter M. Borts, Dental Care by Dr. Hellwege. The important subject of diet and det therapy is ably discussed by Sister Maude Beheman. She makes known new information that is valuable. The diet is liberalized. Food values and vitamins are given due consideration. The normal obesity is given due consideration. In this book will be found very valuable and very helpful to doctor nurse, patient and dietician. The most valuable information in this book for less money.

Modern Treatment and Formulary by Edward A. Mullin, M.D.

Published by F. A. Davis, Philadelphia. Price, five dollars.

This is a book of special interest to the busy practitioner. In it standard works have reviewed as well as current literature. It gives the very latest dependable information in handy, practical and compact form. The major portion of the book is taken up with treatment. More than two thousand prescriptions are given. This section is arranged aphabetically by disease conditions, each prescription bearing a number with a cross reference making it simple to refer to other related sections.

The appendix considers many subjects of great value, such as intravenous therapy, its technique and suggested usefulness formulae for fluid foods with diet tables and food values are very useful. The section on differential diagnosis will be found very valuable to the very ablest practitioner. The latest revision of dosage is given in concise form. The author gives a most helpful discussion on surgical emergencies. The section on poisons and their antidotes is worth the price of the book. The chapter on baths is most interesting. Miscellaneous emergencies is another section that the practitioner can refer to with great relief many times. The busy practitioner can ill afford to be without this attractive concise and authoritative information.

Allergic Diseases—Their Diagnosis and Treatment—By Ray M. Balyeat, M.D.

This is a very interesting and instructive book on alergy. This fourth edition gives much new information on this important phase of medicine that the previous edition did not contain. For many years the author has made special study of allergic conditions and his knowledge is very extensive. There is a discussion of various subjects in a practical manner. The general practitioner will be greatly interested in this book. It is also valuable as a teaching guide and many interesting case reports are given. Much space has been given to allergic study in regard to dermatology and gastro-intestinal allergy. Methods of diagnosis and treatment given are very practical.

This book is published by F. A. Davis Company, Philadelphia, 1936. Price $6.00.

Textbook of Surgery. This 1608 page book by many of the most eminent American surgeons is edited by Frederick Christopher, B. S., M. D., F. A. C. S., Associate Professor of Surgery at Northwestern University Medical School; Chief Surgeon, Evanston (Illinois) Hospital. One-hundred seventy-five of our best-known men contributed to this book, making it probably without exception as authoritative and complete a textbook on surgery as may be obtained. Such men as Claude S. Beck, Willis C. Campbell, Frederick A. Coller, E. Michel Holder, Edward Starr Judd and C. Jeff Miller, Alton Ochsner, Fred W. Rankin and others that are well-known to the Mid-South area and to readers of this journal, have contributed worthily to the greatness of this textbook.

The contents of the book include inflammation and repair, infections, injuries, surgery of the tissues, muscles and ligaments, diseases of the vascular, lymphatic, endocrine and nervous system, orthopedic and plastic surgery, separate discussion of the heart, abdomen, intestines, liver, spleen, etc., with surgical procedures, preoperative and postoperative care.

Textbook of Surgery is published by W. B. Saunders Company, Philadelphia, Pa., and may be had for $10.00.

The Three Vice-Presidents of the Mid-South Post-Graduate Medical Assembly

DR. J. L. DUNAVANT
Ripley, Tenn.

DR. C. W. PATTERSON
Rosedale, Miss.

DR. VAL PARMLEY
Little Rock, Ark.

All three of these doctors are active in organized medicine, and are strong supporters of the Mid-South.

MISSISSIPPI STATE MEDICAL ASSOCIATION
and
COMPONENT SOCIETIES

The Practical Treatment of the Anemias*

FRANK J. HECK, M.D.
Division of Medicine,
The Mayo Clinic, Rochester, Minnesota

In the past ten years marked advances have been made in the treatment of pernicious anemia as well as in the treatment of so-called "secondary anemias." For practical purposes, this consideration may be divided into two parts: (1) that concerning the macrocytic anemias, of which pernicious anemia is the most common example; and (2) that concerning the other anemias which ordinarily are classified as "secondary," but which are either normocytic or microcytic in type. The microcytic or normocytic anemias commonly result from loss of blood externally or are associated with interference in the regeneration of hemoglobin.

In a large majority of cases of macrocytic anemia, pernicious anemia is the type encountered. I should like merely to mention the general symptoms of this type of anemia, such as weakness, fatigue, edema, pallor and so forth and emphasize more particularly those special symptoms which are peculiar to the disease. The two symptoms which are so significant, namely, glossitis and paresthesia, are frequently not mentioned by the patient until they have been specifically inquired about, and in the case of glossitis it may require questioning more than once to bring out the history of its occurrence. Glossitis may involve only a small portion of the tongue or it may be diffusely distributed and involve the under surface as well as the dorsum of the tongue. Other portions of the mucous membrane of the mouth also may be involved. The paresthesias are constant in type; they commonly start in the finger tips and then involve the toes. The distribution is symmetrical and of the "glove and stocking" type. In cases in which the condition is not treated, the paresthesias increase in extent and it is only rarely that spontaneous remission occurs. Other neurologic symptoms, such as ataxia and astereognosis, follow almost invariably after the onset of paresthesia. Diarrhea occurs fairly often, and may be severe.

From a laboratory standpoint, the positive findings of importance are those associated with the blood itself and with gastric secretion. The blood findings depend to a large extent on whether or not anemia is present, and on its degree. Cases are seen in which the value for the hemoglobin is normal, the erythrocyte count is slightly decreased, and all the significant morphologic features of pernicious anemia are present. On the other hand, there may be a well-developed disease of the central nervous system, a normal blood count and a normal morphologic picture.

When the patient is anemic there usually is a high color index, a high volume index, or a high corpuscular volume. These, of course, all depend on the macrocytosis in which the volume of the individual erythrocytes is increased. One can obtain this information by studying the morphology of the erythrocytes, for it requires only a little training with the microscope or in the direct comparison of a normal blood smear with that obtained from a patient who has a macrocytic anemia to demonstate the difference in the morphologic appearance. Slight degrees of macrocytosis may of course be missed by this method but the same criticism holds true for the determination of the corpuscular volume, since only values that are greater than a certain figure are significant. The macrocytes are well filled with hemoglobin and because of their increased thickness they appear more deeply stained than do normal erythrocytes, although the concentration of hemoglobin per unit volume of erythrocyte does not exceed the normal. The other changes of significance are those which occur in the neutrophils. There is an increase in the number of lobes in the nuclei of the neutrophils and there is a tendency for the individual lobes and connecting strands to become elongated. The presence of poikilocytes, nucleated erythrocytes and other changes, while interesting, is not of particular diagnostic value and is useful mainly in distinguishing this type of anemia from aplastic anemia.

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*Read before the Section on Medicine at the Sixty-Ninth Annual Session of the Mississippi State Medical Association, Greenville, May 6, 1936.

Gastric analysis, even after administration of histamine, reveals an achlorhydria, and if free hydrochloric acid is present, many observers dogmatically and probably rightly, place the case in some grouping other than pernicious anemia.

In the treatment of pernicious anemia I shall confine my remarks to, first, those cases in which the symptoms and findings are primarily those of an anemia and, secondly, cases in which anemia may or may not be present but in which peripheral neuritis or combined sclerosis form the major part of the clinical picture.

The treatment in these cases, particularly in the first group of cases, is primarily one of cost and convenience to the patient. That instituted by Minot and Murphy in 1926, in which whole liver was administered orally, is still satisfactory. In the second group, or in those cases in which there is neurologic involvement, most observers agree as to the superiority of the extracts for parenteral use. The further refinements in the preparation of liver extract for oral administration and the later refinements in the preparation of concentrates for intramuscular and intravenous administration represent definite advances from the standpoint of ease and convenience of administration. At the present time, there are many liver extracts that are satisfactory for parenteral use but one should use only those which have been clinically tested and which have been shown to be potent. The fact that a given quantity of one extract has been derived from 100 gm. of liver does not mean that it has as great potency as another extract which has been derived from the same quantity, from a greater quantity or from a lesser quantity of whole liver. It is impossible at the present time for any single clinical group or institution to have available a sufficient number of patients who have pernicious anemia to permit a critical study and comparison of all the potent liver extracts on the market. The selection of any extract should therefore be based on the least cost which will give satisfactory amelioration of the symptoms.

In cases of uncomplicated pernicious anemia, adequate therapy comprises the administration of any form or amount of liver or stomach which will return the blood to a perfectly normal condition, improve the symptoms related to the disease, and prevent the development or progression of such symptoms as paresthesia. This, of course, in the avearge patient means the administration of from ¼ to ½ pound (113.4 to 226.8 gm.) of liver each day or the oral or intramuscular administration of an amount of liver extract that would have an equivalent effect. In cases of uncomplicated anemia, treatment with whole liver seldom fails, and when it does, oral or intramuscular administration of liver extract almost invariably produces improvement.

At the present time the literature regarding the efficacy of treatment of patients who have such complications as peripheral neuritis or combined sclerosis shows some difference of opinion, although the majority of authors feel that proper treatment affords marked relief in most instances, if not from the standpoint of objective physical signs, at least subjectively. In the presence of neurologic complications of pernicious anemia, one is immediately faced with a different therapeutic problem and here one cannot define adequate therapy as being that amount of potent material which will keep the blood perfectly normal. In order to give the patient the best possible chance for improvement, treatment must consist of the oral administration of large quantities of liver, either whole liver or liver extract; the latter may be administered intramuscularly. One might state that in such cases adequate treatment comprises the administration of that amount of liver or liver extract which not only results in a perfectly normal blood but, in addition, produces evidence of progressive improvement in the neurologic symptoms. One must therefore individualize the treatment much more than is commonly done in many diseases. One cannot establish any hard and fast rule as to the amount of liver to be used in these cases, since this depends entirely on the particular preparation that is used. Oral administration of whole liver or liver extract, combined with the parenteral administration of extract, may work out advantageously.

In such cases the intramuscular administration of liver extract seems to produce better results when used alone or in conjunction with oral treatment than does oral administration alone. The administration of dilute hydrochloric acid is seldom necessary in cases in which adequate quantities of liver are employed although occasionally it is of benefit in relieving persistent glossitis, gastro-intestinal symptoms, or diarrhea. In some instances the use of iron hastens improvement in the concentration of hemoglobin.

Physical therapy has a definite place in the treatment of patients who have neurologic involvement. Instruction in simple exercises will often help in re-educating patients to walk, and the use of contrast baths and light massage may markedly improve the symptoms in the lower extremities. Since in many instances the symptoms of peripheral neuritis or combined sclerosis improve very slowly, treatment with the larger doses of liver or liver extract must be continued for a long time. Improvement has been noted up to two years and even longer after the institution of treatment. After the disappearance of all neurologic symptoms, the patient may return to the ordinary maintenance dose of potent material. There are, of course, certain patients who will not undergo any improvement, and in such cases the most that one can hope for is to maintain a status quo without further increase in symptoms.

In the presence of systemic infections or arteriosclerosis, it may be necessary to increase the amount of potent material greatly. For this reason, all patients should be instructed to increase the amount of potent material whenever they suffer from a febrile reaction and to have their blood rechecked after recovering from an illness of this type.

Other macrocytic anemias may respond to treatment with liver just as does pernicious anemia. Tropical or nontropical sprue with macrocytosis responds in a manner similar to pernicious anemia. A number of other causes, such as strictures of the small bowel and multiple intestinal fistulas, have been described as responsible for this type of anemia but some cases still remain in an indeterminate group so far as etiology is concerned.

In cirrhosis of the liver, the macrocytosis may be either normochromic or hypochromic. Some of the patients who have this disease apparently respond to treatment with liver extract although the question has been raised if in these instances a coexisting pernicious anemia was not present. In my experience, treatment with liver extract apparently has been beneficial in only a small number of such cases.

The so-called "secondary" anemias of the past have comprised, for the most part, those in which a normocytosis or microcytosis was associated with a normochromasis or hypochromasia. In other words, they have been anemias in which the color index or volume index was 1.0 or less, or the corpuscular volume was decreased. There are, of course, a great many different diseases which produce anemias of this type, and a careful history and physical and laboratory examinations are essential in the proper handling of the patients in these cases. The hypochromic anemias which affect women and which have been described under a variety of names (simple achlorhydric anemia, idiopathic hypochromic anemia and hypochromic microcytic anemia of women) are commonly without demonstrable cause but the diagnosis in these instances is made by exclusion. The idiopathic anemia of this type which affects males occurs only rarely and particular care must be used in attempting to discover the cause of such anemia. The practical handling of these patients therefore is different.

The morphology of the blood cannot be used as a guide in diagnosis, for the hematologic picture may be exactly the same in a case in which anemia is the result of bleeding from carcinoma of the stomach, hemorrhoids, menorrhagia, and so forth, as it is in a case of idiopathic anemia. No attempt will be made to classify the whole group of hypochromic anemias, for each writer on the subject presents an individual classification. In considering them I shall take up those idiopathic anemias which have been variously classified as simple achlorhydric anemia, idiopathic hypochromic anemia, microcytic hypochromic anemia, and so forth, but which belong to one group. This type of anemia usually affects women who are between the ages of thirty and fifty years and who complained primarily of fatigability and weakness and who not infrequently complain of glossitis. Paresthesia has been reported by some authors but this has not been encountered in my experience at the clinic. Not infrequently, there is a history of the occurrence of anemia at an early age, with recovery after administration of iron. The menstrual history may reveal some menorrhagia, although in most instances the menses are normal. There should be no history of excessive loss of blood. Physical examination may reveal a marked pallor. The spleen is palpable in a moderate percentage of cases. Koilonychia may be present.

Laboratory studies will reveal that the value for the hemoglobin is 9, 10 or 11 gm. per

100 c.c. of blood; the erythrocyte count may be essentially normal. In cases in which the anemia is more severe, the value for the hemoglobin and the erythrocyte count may be reduced proportionately. Morphologically, one may note hypochromasia in the normocytes or microcytes. Regeneration of erythrocytes is normal or slightly increased. The differential count does not reveal any abnormality. Gastric analysis reveals, as a rule, an achlorhydria or hypochlorhydria, although the gastric acidity may be normal. Other laboratory data will not reveal anything abnormal.

As mentioned previously, the diagnosis of this type of hypochromic anemia is made by excluding other causes of loss of blood. Practically, in cases in which the patient is a woman who can be kept under observation, and a careful history and physical examination do not reveal any abnormality, one is usually safe in instituting treatment without extensive laboratory studies. If prompt response to treatment does not occur, then a more extensive investigation must be carried out. While this type of anemia also affects males, it is so rare that it is never safe to proceed with treatment without careful laboratory studies, which should include repeated examination of the stools for occult blood and complete roentgenologic study of the gastro-intestinal tract.

In the treatment of this type of anemia, the trend until very recently has been to administer massive doses of iron, that is, the equivalent of 1 gm. of metallic iron. Ferric citrate or iron and ammonium citrate, which had such a great vogue a few years ago, are now being replaced by the less expensive and more simple compounds of iron, such as reduced iron and ferrous sulphate. The dosage of the compounds of ferric citrate was 60 to 90 grains (4 to 6 gm.). The disadvantage of administering the preparations of citrate of iron were: first, the great cost unless the bulk form of iron and ammonium citrate was used, and, second, the occurrence of abdominal distress and diarrhea in 15 to 20 per cent of cases in which the required dosage was administered. Reduced iron in doses of 15 to 20 grains (1 to 1.3 gm.) daily, or in the form of Blaud's pills, and the ferrous sulphate in daily doses of 10 to 15 grains (0.6 to 1 gm.) may be prescribed at much lower cost to the patient.

One must make certain that the patient is receiving a well-balanced diet, and recent practice has been to supplement the diet with vitamin concentrates. The oral administration of whole liver does not offer any advantage in treatment. Opinion differs as to the necessity or advisability of the parenteral use of liver extracts. In most instances, at least, the final result is just as satisfactory with the use of iron preparations alone as it is when liver extracts are administered. Minot and Heath have reported the use of dilute hydrochloric acid as an adjunct in the treatment of a group of women who had achlorhydria; the iron apparently was utilized much more satisfactoriily after the acid was administered than it was before. The use of copper has not up to the present time been proved necessary. Treatment for two to three months usually suffices to cause the value for the hemoglobin and the erythrocyte count to return to normal. Certain patients will need to take a small amount of iron regularly to maintain a normal concentration of hemoglobin and a normal erythrocyte count but this can be determined only by actual trial. Those patients who give a history of repeated relapses and remissions are best treated with a maintenance dose of iron after the hematologic picture has returned to normal.

Salts of iron may be used to advantage in cases in which the anemia is definitely the result of loss of blood. While correction of the causative factor usually will cure the anemia, the administration of iron commonly hastens restoration of the concentration of hemoglobin and the erythrocyte count to normal. In the anemia which accompanies infections, lesions such as metastatic involvement of bone (which interferes with hematopoiesis), leukemias, and chronic glomerulonephritis, the use of the salts of iron is usually disappointing. Robscheit-Robbins and Whipple, who reported the results of their experiments on the regeneration of hemoglobin in the presence of infections, have demonstrated that the anemia which occurs in cases of infection results because the metabolism of hemoglobin is held in abeyance and that this type of anemia is not attributable to an actual destruction of hemoglobin.

SUMMARY

In the treatment of pernicious anemia and other anemias of the macrocytic group, adequate treatment comprises the administration of that amount of liver or other potent material which will maintain a perfectly normal blood and keep the patient free of symptoms. In cases of anemia in which there are neurologic manifestations, adequate treatment necessitates the administration of that amount of potent material which will not only produce and maintain a normal blood but which also will cause improvement in the neurologic symptoms. After a return to normal, this second group of patients may then receive the ordinary maintenance dosage.

In the hypochromic anemias, or anemias of the "secondary" group, whether they are idiopathic or the result of loss of blood, the administration of iron produces marked benefit. In cases in which there has been loss of blood, it first is necessary to correct the condition responsible for such loss. In the cases in which anemias are the result of infection, leukemia, or metastatic lesions of bone, iron is seldom of benefit.

DISCUSSION

Question: What are the significant microscopic findings in the blood in cases of pernicious anemia? Dr. Heck: Two points are of primary importance: First, the macrocytosis, when present, is most significant and can be determined at a glance when one has had a little experience in the examination of blood smears. For those who look at blood only occasionally, the best procedure is to compare the size of the erythrocytes in a normal blood smear with those in a blood smear obtained from the patient. The mental image of the size of the corpuscles can usually be carried over for the short time necessary to examine smears. The second change of significance is the increased lobulation in the nuclei of the neutrophils. The demonstration of this change is not difficult but is time consuming. In normal blood smears, examination of a hundred neutrophils would show the following average distribution: twelve neutrophils which had one lobe, twenty-five which had two lobes, forty-three which had three lobes, eighteen which had four lobes, and two which had five lobes. In practically all cases of pernicious anemia there is a definite increase in the number of leukocytes which have five lobes, and 5 to 10 or more such leukocytes will be found in counting 100 neutrophils. Under adequate treatment and after sufficient time has elapsed, both the macrocytosis and the increased lobulation of the neutrophils will have disappeared.

Question: How do you treat patients who do not have anemia but who have a sore tongue and some paresthesia? Dr. Heck: They are treated just as they would be treated if they had anemia. Many patients may have glossitis for years without having any anemia. In cases in which glossitis alone occurs, there are, of course, other causes for the condition. In the presence of achlorhydria, one thinks of pernicious anemia but cannot always be certain about it. Middleton has shown that the administration of vitamin B will cure certain patients who have glossitis alone.

Question: How much liver extract do you give intramuscularly? Dr. Heck: In answering this question it is necessary to pick out a given extract and in the following discussion the dosage refers to the Lederle preparation which is supplied in ampules which contain 3 c.c. In starting treatment, the content of one ampule is given daily for three or four days, then one injection a week is administered until the blood is normal. After this, in a case of uncomplicated anemia, one can gradually lengthen the intervals between injections. With this preparation, about 15 per cent of the patients require one injection a week, 45 per cent require one injection every two weeks, and the rest require one injection every three weeks or at even longer intervals. The treatment of these patients must be carefully controlled by frequent erythrocyte counts so as to be certain that they are receiving adequate treatment. In cases in which the patients have neurologic syptoms, the weekly injections are continued until the patient is free of symptoms. Such patients are instructed in the use of physiotherapy at home. They are instructed in the use of simple exercises and are taught how to take contrast baths.

Question: What are the presenting symptoms in cases of idiopathic hypochromic anemia? Dr. Heck: Most of these patients complain of fatigability, weakness and pallor. A moderate number have glossitis.

Question: Do you expect weakness to disappear when the condition of the blood returns to normal? Dr. Heck: Ordinarily I do, unless other factors are present.

The Ethical Relations of the Family Physician and the County Health Officer in the Observance and Enforcement of State and Local Regulations in Communicable Disease Control*

F. M. SMITH, M.D.
Vicksburg, Miss.

In practically all states of our union, either by the promulgation of a legally constituted board of health or by legislative enactment, or both, certain rules and regulations are formulated for the control of communicable disease that in part with liberties or restraints of human cases, carriers, and contacts.

The substance of food, fomites, water, wastes, etc., enter into control of many communicable diseases but are loosely connected with the subject to be discussed, "The ethical relationship between the family physician and the health officer in the observance and enforcement of those requirements where each has a legal service to perform." This common service most always, if not always, centers around the case, the contact, and the carrier.

In our own state, Mississippi, the state regulations require "Each and every licensed physician practicing in the state who treats or examines anyone suffering from or afflicted with, or suspected to be suffering from or afflicted with, any of the notifiable diseases, to report same on the first day of the month"—to report to the health officer the number of cases seen.

These reports can be made by each individual physician on the Monthly Numerical Morbidity Report Card that is furnished by the state through the Treasury Department, United States Public Health Service; or in clinics, hospitals, etc., the staff may have its secretary make out one report for all such report showing the members of the staff whose cases are reported. These reports are made directly to the county health officer who in turn transmits such reports to the state department of health. This is the monthly reporting of notifiable diseases.

Now in the list of notifiable diseases, as required by our state, there are certain diseases that are considered "more violently contagious" than others and a report of these is required to be made to the health officer in six to twenty-four hours (ophthalmia neonatorum is to be reported in six hours). The others of this list are typhoid fever, smallpox, diphtheria, scarlet fever, bubonic plague, yellow fever, meningococcus meningitis, acute poliomyelitis, leprosy, tuberculosis (pulmonary), other forms of tuberculosis, other forms of meningitis, rabies in man, undulant fever, etc. These may be reported on a clinical report card, or by telephone. When the report is by telephone, the health officer or his secretary receiving it makes out the clinical report card, signing the reporting doctor's name but marking the report "made over telephone."

It perhaps is worthy of comment or at least of passing notice to state that this regulation not only requires the reporting of these so-called "violently contagious" diseases or cases in this twenty-four hour limitation, but likewise the reporting of all *suspected* cases.

We note under another section of these regulations that "Any physician—who shall fail, neglect, or refuse to comply with, or shall falsify any report, or shall violate any of the provisions of the rules and regulations—shall be guilty of a misdemeanor and subject to the penalty provided in section 4897 in Mississippi code of 1930."

So much for a few of the requirements, duties and responsibilities of the practicing physician, the censure and legal penalties for non-performance of these duties. Now to consider some of the health officer's duties, requirements, liabilities, etc.

We note in these regulations that when a physician is not in attendance to report cases or suspected cases, that a health officer is expected or required to make an investigation when such cases or suspected cases are reported by landlord, tenant, supervisor, trustee, parent, etc.

We note further in all of these communicable diseases that have been designated as the "more violent contagious diseases," regardless of who reports same, the *Health Officer* is expected and legally required to institute and terminate quarantine.

We note further in these regulations termed "general regulations," it reads, "Any child affected with any contagious skin disease, pediculosis (lice), scabies (itch), or any other condition considered prejudicial to the health and welfare of the pupils of and private, parochial, or public school, shall be excluded from said school by the county health officer, until, in the opinion of the county health officer, said child shall be free from any condition prejudicial to the health and welfare of other pupils."

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*Read before the Issaquena-Sharkey-Warren Counties Medical Society, Vicksburg, Nov. 10, 1936.

Many other requirements are made, but finally we read, "The County Health Officer shall be responsible for the enforcement of the rules and regulations governing morbidity reports in his respective county. Failure, neglect, or refusal on the part of the county health officer to enforce the rules and regulations shall be grounds for removal from office and shall render him liable to penalty as provided in section 4897 Mississippi Code of 1930." This, in a way, puts the doctor and the health officer "on the spot" in their mangement or mismanagement of communicable disease.

In pondering over this problem of law, law observance, law enforcement, penalties, etc., we recall in part the teaching of the inspired writer, who in substance stated, "If the spirit of Christ be in you, then indeed are you not subject to the law." So I paraphrase this divine teaching by saying, if the spirit or consciousness of right action and purposes abides in us, and if we possess a proper or correct understanding of these requirements, then indeed are we not subject to these laws. The law or legal requirements cease to be a threat and become a guide.

Let us in our further discussion of this subject remind ourselves that the legal, ethical, and implied duties of the health officer in the matter of communicable disease control is the safe-guarding of the public health, the prevention of the spread of disease. At no time is it medical care of the case, carrier or contact.

The legal, ethical, and implied duties of the attending physician are the medical care of the individual case and the prompt reporting of the case or suspected case to the health officer. Whether we accept these statements as complete and faultless or as a postulate we feel confident you will grant that it is an acceptable hypothesis for further discussion and an unobjectionable basis for action in establishing ethical relations between the practicing physician and the health officer.

We are impressed that our state regulations are fairly clear. Some points on first reading seem ambiguous, or seem to have a double meaning, but on re-reading with closer attention, the meaning, we think will appear clear. Two points or requirements we recall might necessitate a fuller expression or interpretation that the ethical relations of the doctor and health officer may be pleasantly observed. We present these in the form of questions, viz:

1. When shall a school teacher of the private, parochial or public schools be sent a certificate of health by the family doctor and by the health officer for readmittance to or continuance in school of a pupil?

2. What are the ethics in the sick room, home or apartment, etc., relating or pertaining to the case and contacts of communicable disease between doctor and health officer?

In considering the first question our interpretation of the state regulations and of necessity the ethical relations involved is that when a teacher or parent is suspicious of a skin rash or certain symptoms being indicative of a communicable disease, and the child is taken to the family physician, he, the family physician, is within his legal and ethical rights to write a certificate of health or his opinion of the case or suspected case, and if said certificate states the child is free of communicable disease the teacher permits the entrance or re-entrance of the child to the school. But if the child has been *excluded* by the *health officer,* only the health officer is legally permitted to readmit and of necessity write the certificate of health for readmittance for this excluded child.

So when a practicing physician has brought to him a child with the request that he write a certificate for readmission to school, the ethical procedure for him is to determine, if possible, whether the child has been excluded from school by the health officer, and not on every occasion be satisfied with the volunteer information that may be readily given by parents or neighbors when authentic information may be obtained by calling the school or health officer. If he, the family physician, finds the child has been excluded by the health officer under no circumstances, if he desires to be ethical, should he write the certificate for readmittance to school, for under such conditions the school or individual teacher cannot *legally* accept same if written.

Now in dealing with a child that has been out of school sick of a communicable disease, the health officer and the health officer alone is legally qualified and required to institute quarantine and release same. Therefore the responsibility rests entirely upon him of readmitting recent cases, carriers and contacts of communicable disease to school irrespective of who treated the case, carrier, or contact.

Now briefly considering the second question, the ethics of the doctor and health officer in the sick room, at home or apartment, where there is a case and perhaps contacts of a communicable disease, we again should think in terms of each one's duty and responsibility. The doctor is primarily concerned in the case, getting the patient well. Secondarily, he is concerned in the contacts, especially those in the home and family of the patient that look to him for medical care, and who might by preference look to him for preventive medical care. The health officer's duty and responsibilities are those of safeguarding the public, endeavoring to prevent the further dissemination of the disease, which make his interest primarily in the spread contacts, fomities, or other possible channels of future spread as well as the source contacts or *other* chains of spread to be included in an epidemiological record. Secondarily, his interest is in the case only in the matter of diagnosis and isolation, isolation in the home, the apartment, or the institution, so that others, even of the family, are more effectively safeguarded and that all possible infection from the case is more definitely removed from possible contamination of food within the building or making its egress to foods or individuals without.

The period of isolation and quarantine is definitely and legally fixed in most communicable diseases but must be prolonged by the health officer when certain complications arise as otitis media and absess formations in scarlet fever, etc. Furthermore, the release of the quarantine by the health officer is not determined entirely by the passing of allotted days, arising complications, but is also contingent on acceptable terminal disinfection of room and premises. Therefore, it is obvious that when a practicing physician assumes or delegates to himself the performance of these requirements he breaks not only good ethics with the health officer but usurps his, the health officer's prerogative office.

When a patient, carrier, or contact is in isolation or quarantine it is a breach of ethics for the attending physician to request or require that the patient, carrier, or contact be brought to his office for even further medical treatment without conferring with the health officer and obtaining his consent, for such practices are interdicted by the rules and regulations governing the control of such diseases. In these words, "Any person suffering from a contagious disease must not go to or be taken to or moved from *any* house or public place without securing a permit from the County Health Officer."

Quarantine as commonly understood and accepted refers to limitation of liberties, and movements of the patient, carrier, and contact, but perhaps legally and correctly *isolation* pertains to the patient only and quarantine pertains to limitations of movement of the carrier and contact, but as we have formerly stated the performance of the duty is imposed on the health officer.

Now it is perfectly natural and proper for heads of a family to discuss with their family physician what disposition to make of their other children, contacts in the household, in the presence of a diagnosed communicable disease; nevertheless, the family physician should not be unmindful of the fact that the final assignment or allotment to other homes or places, if desirable, are *legally* made and *permitted* only by the health officer. Here so often ethical relations are strained and too often broken.

Just a few months ago a family in a near by city called in their family physician to see one of their two children, and he diagnosed the case scarlet fever. They appealed to him for advice as to what to do with their other child. So, even before the health officer of that city and county was notified or consulted in this matter, a prerogative of his office, the family physician advised that the other child, the contact, be sent to the grandmother living in Vicksburg, Mississippi, and in two hours without the knowledge of the local health officer, the knowledge or consent of the Warren County health officer, or even the child's grand mother's knowledge or consent, the child was here. But, in the language of the street, things soon began "to pop," for in this house the grandmother had roomers, apartments occupied by families with small children. Some roomers worked in food product places here; there were one or two school teachers as I recall, and a son of the grandmother was working in the office of the Warren County Health Department. Well, briefly, in a few more hours, long before midnight of the same afternoon, the child was on its way back to the nearby city.

All of this could well have been prevented had the attending physician observed the legal requirements and ethics prevailing and left to the health officer his legal and ethical rights and duty of supervising, directing or approving the movements of the contacts. Therefore, the ethical procedure is obvious in the matter of quarantine when same deals with cases, carriers, contacts on home. or industries, schools, and various groups of assembled peoples, etc.

Now let us put the health officer "on the spot" again. When he so far loses sight of the duties of his office and his ethical relation with an attending physician, as to so much as *hint* at the *inadvisability of any* certain treatment the attending doctor may be using, or openly finds fault with the treatment or management of the case other than its isolation, or so much as intimates that "doctor so and so" treats the cases altogether differently, he is guilty of the grossest violation of medical ethics between these two specialties.

We admit that a health officer must be circumspect, adroit, and cautious not to let some *pumping* questions get him to offer an opinion that he has no legal or ethical right to state. Better sacrifice his prestige as a fully informed medical man than the ethical relationship with the family doctor. There are enough things in the field of prevention, the manner in which communicable diseases are spread, things that he may ethically discuss and show his much learning (if he has it), rather than violate sacred ethical relations by entering the domain of certain medicine. The prerogative of the attending doctor. That sacred intimacy and relationship existing between the patient, the family and the family physician should and must be held inviolate by a health officer.

Medical ethics recommended for observance in medical practice or between any two specialties of medicine, whether founded on legal enactments or promulgated by fraternal conferences in mutual agreement, or established upon a beneficial practice repeatedly followed, when same has been proven as just and right to all concerned, dignified as an ethics of our profession or specialties, then in conformity with *this* ethics we should direct the tenure of our professional service and practice and abide in its keeping.

Mississippi State Medical Association

ORGANIZED 1867

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EDITORIALS

A CYCLE OF FIFTY YEARS

At the 20th annual session of the Mississippi State Medical Association at Jackson in April, 1887, President R. S. Toombs of Greenville, in his address, spoke as follows:

"We are in the midst of an era of prosperity hitherto unknown to our country. The South is attracting the attention of the whole world. Its importance is being augmented every day by the discovery of hidden sources of wealth, and magnificient possibilities. The bonds of a severed Union are being strengthened by the intermingling of representatives of the various sections in the pursuit of business and pleasure. We are indeed awakening to a grand future. Our lofty mountains with peaks towering into ethereal space have slept, Rip Van Winkle-like, for centuries. They are just now quickening into life and will deliver unto us their immense wealth of minerals.

"Our own grand State, bordered on the west by the great artery of commerce, with its rich alluvial bottoms, and on the east by fertile prairies, while her pineries—the finest in the world—awaits only the advent of capital and the honest immigrant to stir her into renewed life, and she will assume first magnitude in the galaxy of stars that now glitter in the Southern horizon."

PNEUMONIA

Carefully controlled statistics show that treatment of pneumonia due to Type I pneumococci by the use of specific serum results in a definitely lowering of mortality. When given early, the crisis in lobar pneumonia due to this organism may be induced within 48 hours in some cases. Apparently definitely good results are obtained by the use of specific sera in pneumonia due to pneumococci of Types II, V, VII, and VIII.

Often in the past, serum treatment has not received the confidence that it deserves. There have been numerous reasons for this. True lobar pneumonia is most often due to pneumococci. Broncho-pneumonia may be due to pneumococci but usually is not. Autopsy reports show that many cases of pneumonia called lobar are really broncho with coalescence of involved patches. There are many types of pneumococci. The old Type IV, which was recognized as a conglomeration of types, has been divided into some 30 different types for which diagnostic sera are available. Serum treatment is not effective unless the specific type is used.

Formerly some time and considerable equipment and experience were necessary for determination of pneumococcus types. Mouse inoculations were necessary, followed by precipitin and agglutination tests and cultures. Sometimes, perhaps, because they were told that serum treatment was good, doctors may have given serum without knowing the type of pneumococci present or even that pneumococci were present. Of course, dependable results could not be expected, but the serum was condemmed.

At least in the experience of some observers, true pneumococcic lobar pneumonia was rare in Mississippi until two or three years ago. In the past few years pneumococcic pneumonia has been on the increase, and it behooves the doctors of Mississippi to make use of a treatment that offers hope of saving lives in a disease of so many fatalities as pneumonia.

Typing of sputum has been made easy by the Neufeld method. Diagnostic type sera may be purchased at a reasonable cost. The only equipment necessary is a microscope and a few slides and cover glasses. A drop of sputum is mixed with a drop of type serum on a slide, covered with a cover glass, and examined under the microscope. Pneumococci have capsules.. If pneumococci are mixed with serum of the same type, these capsules swell to a definitely large size. The type may be determined in a few minutes and if a therapeutic serum of that type is available the patient may receive treatment soon thereafter. Any doctor with a little experience may make the type determinations in his office or even at the bedside. There are also some 80 hospital laboratories in Mississippi. Any of them should be able to do the typing promptly. While the original work on the

Neufeld method of typing indicated that best results were obtained when the sputum was examined immediately, it seems probable that type determinations may be made even after several days when it is necessary for specimens to be shipped to a laboratory.

It is necessary for accurate typing to have *sputum coughed up from the lungs,* not saliva or post-nasal drippings. A good specimen may be obtained by spending a little time with the patient.

Of, course, also, serum should not be given therapeutically, without knowing that the patient is not sensitive to horse serum. Simple intracutaneous tests will give the necessary information. If a patient is serum sensitive, he may be desensitized.

At least in Type I pneumococcus pneumonia cases, serum treatment should give results comparable to the treatment of diphtheria with antitoxin.

EARLY DIAGNOSIS OF SYPHILIS

There seems to be a definite movement to reduce the incidence of syphilis in the United States. Especially is the United States Public Health Service interesting itself in the problems of this widespread disease.

It has been recognized that early diagnosis is important and examination of chancre fluid by dark field has been urged for many years. In spite of this, it is probable that still many cases of syphilis are not definitely recognized until secondary signs appear and the Wassermann or other blood test becomes positive. The differentiation of chancre and chancroid is not always easy, and probably is not certain without dark field examination.

It is interesting to note that an effort is now being made to get more positive diagnosis in the primary stage of syphilis by providing means of collecting and shipping chancre fluid to laboratories equipped to make dark field examinations, notably the New York State Department of Health. It is recognized that local approved laboratory service should be used wherever available. When the specimen must be shipped, capillary tubes are furnished. Much depends on the collection of the material for examination. It is directed that the lesion be washed with sterile physiological salt solution, followed by firm rubbing with sterile gauze and the removal of any blood that may appear. The tissues at the base of the lesion are then gently compressed until a drop of clear serum collects on the abraded surface. This drop is touched with the capillary tube held in a horizontal position. The serum will then rapidly enter the tube owing to capillary action. The tube is then sealed at both ends by pressing into wax provided, and sent to the laboratory. It is advised that repeated tests are desirable as failure to demonstrate the spirochaetes does not exclude syphilis. If an antiseptic or other local treatment has been applied, a salt solution compress can be applied and the patient instructed to return on successive days for the collection of specimens.

In case an antiseptic has been used and the regional lymph glands are enlarged, fluid from them may be submitted. In a bilateral adenitis there may be an associated chancroidal infection and one or more of the glands may be fluctuating, inflammatory and tender. The indurated, shotty, nontender glands should be chosen.

The skin is sterilized over the selected gland. Sterile salt solution is drawn into a small syringe, using a 22- to 24- gauge needle. The gland is immobilized by grasping it so that the skin is drawn tightly over it. The needle is thrust into the gland, rotated to break apart some of the tissue at its tip, a few drops of salt solution injected with care that the needle enters the gland and not the surrounding tissues. A few drops are drawn into the syringe from the glandular tissue. The aspirated fluid, which should contain very little blood, may then be deposited from the syringe onto a clean glass side and collected in capillary tubes in the same manner as for fluid from a chancre.

It may be that if proper specimens are obtained, more early diagnoses with prompter treatment and earlier cures will be obtained.

In "Veneral Disease Information," of December, 1936, is abstracted an article, "Examination For Treponemata by Gland Puncture," by Panagiotis Photinos (Ann. d. mal. ven., Paris, July 1936, 31:481), in which it is stated, "The author describes 104 cases of primary and secondary syphilis in which he performed gland puncture, with positive results in all."

"SEVEN STEPS TO THE UNDERTAKER

Dr. Frank L. Rector, Field Representative of the American Society for the Control of Cancer, lists seven fallacies or "steps" in regard to cancer as entertained by some physicians as follows:

"Step 1. Efforts to enlighten the public about cancer only stimulate cancerphobia and increase morbid fears about the disease."

"Step 2. Cancer education drives the public quacks."

"Step 3. The profession has no cure or even hope to offer the cancer patient."

"Step 4. Treatment often increases the patient's suffering."

"Step 5. By telling the patient the truth, his condition is often aggravated."

"Step 6. The patient will not cooperate in treatment."

"Step 7. A watchful waiting attitude on the part of the physician is often the best method to pursue."

DIRECTORY AND CALENDAR OF MEDICAL SOCIETIES

Information is not complete. Secretaries of societies are urged to send in full data so that it may be known when the societies of the state meet; also the names of the officers directing their activities this year should be known.

Mississippi State Medical Association: 70th Annual Session and Thirty-fourth Annual Session of the House of Delegates, Meridian, May 11, 12, and 13, 1937.

Adams County Medical Society: A. R. Perry, Natchez, president; F. S. Dixon, Natchez, secretary. Meets third Tuesday, each month; Natchez, 7:30 p. m.

Amite County Medical Society: D. H. Thornhill, Crosby, secretary.

Central Medical Society: L. W. Long, Jackson, president; Gayden Ward, Jackson, secretary. Meets first Tuesday, each month, Robert E. Lee Hotel Roof, Jackson, 7:00 p. m., except July and August.

Claiborne County Medical Society: E. P. Jones, Hermanville, president; G. W. Acker, Port Gibson, secretary.

Clarksdale and Six Counties Medical Society: J. E. Powell, Charleston, president; N. C. Knight, Clarksdale, secretary. Meets fourth Wednesday of March and second Wednesday of November, Elks Club, Clarksdale, 2 p. m.

Clark-Wayne Counties Medical Society: W. P. Gray, Waynesboro, president; Albert Hand, Shubuta, secretary.

Coahoma County Medical Society: J. A. Slack, Friars Point, president; N. C. Knight, Clarksdale, secretary. Meets second Wednesday each month, Clarksdale Hospital, Clarksdale, 1:30 p. m.

Delta Medical Society: J. M. Wright, Hernando, president; L. L. Minor, Rt. 4, Memphis, secretary. Meets first Monday of January, April, July, October, Hernando, 10 a. m.

East Mississippi Medical Society: T. G. Cleveland, Meridian, president; Bob A. Cameron, Meridian, secretary. Next meeting, March 11, Meridian.

Franklin County Medical Society: L. Costley, Meadville, secretary.

Hancock County Medical Society: A. P. Smith, Bay St. Louis, secretary.

Homochitto Valley Medical Society: Lucien S. Gaudet, Natchez, president. W. K. Stowers, Natchez, secretary. Meets January, April, July and October, 2 p. m.

Issaquena-Sharkey-Warren Counties Medical Society: G. C. Jarratt, Vicksburg, president; Leon S. Lippincott, Vicksburg, secretary. Meets second Tuesday, each month, Mississippi State Charity Hospital, Vicksburg.

Jackson County Medical Society: W. J. Weatherford, Pascagoula, president; R. G. Lander, Pascagoula, secretary. Meets second Thursday of March, June, September, Pascagoula, 7 p. m.

Jefferson County Medical Society: W. T. Harper, Fayette, secretary.

Newton County Medical Society: V. L. Henton, Decatur, president; Dudley Stennis, Newton, secretary. Next meeting, second Thursday in March, Decatur, 2:30 p. m.

North Mississippi Medical Society: R. G. Grant, Holly Springs, president; A. H. Little, Oxford, secretary.

Northeast Mississippi Thirteen Counties Medical Society: L. L. McDougal, Booneville, president; A. J. Stacy, Tupelo, secretary. Meets third Tuesday, March, June, September and December. Next meeting Booneville, March 16.

Pike County Medical Society: J. L. Bauer, McComb, president; Elise Rutledge, McComb, secretary. Meets first Thursday, each month, McComb, 6:30 p. m.

Pontotoc County Medical Society: L. O. Carruth, Tupelo, R.F.D., president; O. F. Carr, Pontotoc, secretary. Meets first Tuesday, each month, Pontotoc.

South Mississippi Medical Society: J. P. Culpepper, Hattiesburg, president; Carlton Temple, Hattiesburg, secretary.

Stone County Medical Society: Earl W. Green, Wiggins, secretary. Meets with Harrison-Stone-Hancock Counties Medical Society.

Tate County Medical Society: W. D. Smith, Senatobia, president; J. Sidney Eason, Coldwater, secretary. Meets second Wednesday, each month, Senatobia.

Tri-County Medical Society: D. T. Langston, New Hebron, president; R. B. Zeller, Hazlehurst, secretary. Meets March 9 Copiah-Lincoln Junior College, Wesson; June 8, Walthal Hotel, Tylertown; September 14, Riverside Hotel, Monticello; December 14, Whitworth College, Brookhaven, 12:30 p. m.

Wilkinson County Medical Society: J. W. Brandon, Woodville, president; E. M. Butler, Centreville, secretary. Meets second Thursday, each month, Centreville.

Winona District Medical Society: P. B. Brumby, Lexington, secretary.

MISSISSIPPI HOSPITALS—CALENDAR OF STAFF MEETINGS

MISSISSIPPI STATE HOSPITAL ASS'N. Eighth Annual Session, Meridian, May 10, 1937.

Anderson Infirmary: Second Friday, each month 6:00 p. m.

Biloxi Hospital: First Friday, each month, 7:30 p. m.

Clarksdale Hospital: Second Wednesday, each month, 1:30 p. m.

George C. Hixon Memorial Hospital: First Monday, each month.

Gilmore Sanitarium, Amory: Third Thursday, 7:30 p. m.

Greenwood-Leflore Hospital: First Thursday, each month, 7:30 p. m.

Houston Hospital: Last Thursday, each month.

Jackson County Hospital: Second Thursday, each month except July and August, 7 p. m.

Jackson Infirmary: Last Tuesday, each month, 4 p. m.

Meridian Sanitarium: Second Thursday, each month, 6:30 p. m.

Mississippi Baptist Hospital: Third Tuesday, each month, 6:30 p. m.

Natchez Sanatorium: Second Tuesday, each month, 7:30 p. m.

Northeast Mississippi Hospital: First Monday, each month, 7:30 p. m.

Rush's Infirmary: Second Thursday, each month, 7 p. m.

South Mississippi Infirmary: Last Thursday, each month, 5 p. m.

U. S. Veterans' Hospital, Gulfport: Every Monday, Tuesday, Wednesday and Thursday, 10:45 a. m.

Vicksburg Hospital: Second Thursday, each month, 7 p. m.

Vicksburg Infirmary: First Wednesday, each month, 7 p. m.

Vicksburg Sanitarium: Tenth or week of tenth each month, 6:30 p. m.

Winona Infirmary: First Thursday, each month, 7:30 p. m.

STATE BOARD OF HEALTH

The State Board of Health is conducting an interesting series of broadcasts, designed for popular health instruction, are to inform the public concerning the functions of the State Board of Health, public health problems, and the policies of the health department in solving these problems; to secure desirable changes of opinions and habits; and to stimulate taxpayers and influential groups to action in acquiring necessary facilities for carrying on adequate health work.

A month's travel scholarship has been granted to the following members of the State Board of Health through the Commonwealth Fund:

Dr. T. W. Kemmerer, director of the State Hygienic Laboratory, and Mr. Herbert A. Kroeze, director of Sanitary Engineering. Miss Ora Phillips, nurse in the Field Unit, has been awarded a four month's nursing scholarship.

Dr. L. H. Kramer, dental director for the State of Kansas, spent a week in Mississippi visiting health departments and observing mouth hygiene activities in Coahoma, Washington, Hinds, Pike and Lauderdale Counties.

Dr. L. A. Barnett, director, Leflore County Health Department, returned the middle of December from a three months' scholarship to Vanderbilt University.

Dr. R. G. Lander, director, Jackson County Health Department, returned the middle of December from a three month's scholarship to Vanderbilt University.

Dr. C. R. Gillespie has been appointed acting director of Adams County Health Department.

Dr. A. R. Perry has been appointed director of Jones County Health Department effective January 1st.

The following list of medical officers from Mississippi attended the Venereal Disease Control Officers' Conference held in Washington on December 28-30: Dr. A. C. Bryan, Dr. Paul Klotz, Dr. J. M. Smith, Dr. Otis Biggs, Dr. G. P. Sanderson, Dr. Natham B. Lewis, Dr. W. E. Noblin, Jr., Dr. A. G. Ward, Dr. T. Paul Haney, Jr., Dr. D. V. Galloway, and Dr. John B. Howell.

State Commission for the Blind met Saturday, December 19 at 10:30 in the State Board of Health Offices. Mrs. J. S. Vandiver, Senator Jesse Adams, Dr. David E. Guyton and Mrs. D. W. McBryde were present.

The following nurses are at Vanderbilt University for four months' scholarships beginning January 1, 1937.: Edna U. Edwards, R. N., Laurel; Thelma Welch, R. N., Oxford; Ruby Dell Young, R. N., Hattiesburg; Newry C. Thompson, R. N., Popularville.

Three members of the State Board of Health's Division of Sanitary Engineering staff, Cy Emery, Jean Norris, and James L. Lary, have completed three months' scholarships study at Vanderbilt University. They have resumed duties in Pearl River, Sunflower, and Leflore Counties respectively.

Scholarships to the Vanderbilt School of Engineering were made possible through the Social Security Fund.

Dr. E. Bryant Woods, director of the Bureau of Maternal and Child Health of Florida, spent a short while observing Mississippi's program for maternal and child health.

For the first six months of 1937, a full time health unit will be operated by Jones county and starting July 1, the Commonwealth Fund will lend assistance that will result in doubled activity. The county's share of the expenses will be augmented by the City of Laurel and state funds.

Heading the full time unit, will be Dr. Perry, Adams county health director, who will move his family to Laurel and take charge the first of the year.

State Institute for Public Health Nurses was held in Jackson with splendid attendance.

Speakers were: Maxwell E. Lapham, who gave a lecture on obstetrics and Dr. Robert A. Strong, who discussed infant care.

The State Department of Vital Statistics was host to Dr. W. W. Hubbard of Nashville, Tennessee, for ten days during the month of December. Dr. Hubbard came to the Mississippi Department in order to study methods in use in this State for gathering and completing the records of births, deaths, marriages, and divorces. He took charge of the Vital Statistics Department of the Tennessee State Board of Health on January 1st, of this year.

The doctors of Mississippi have been requested by Dr. Whitfield in a recent letter to assist him in every way possible in gathering full data on all accidental deaths occurring in the State during the present year. Dr. Whitfield makes the point that between 1500 and 2000 deaths occur every year in Mississippi through accidental and violent means, and very little is being done to prevent this unnecessary slaughter. He proposes to make a careful study of the causes of these unnecessary deaths so as to be able to advise methods of prevention.

Mr. J. A. McLeod, regional consultant with the U. S. Public Health Service, spent two weeks in the State, from December 21 to January 2, visiting the Community Sanitation and Malaria Control Drainage Projects. Mr. McLeod is very much pleased with the results which are being accomplished through these two projects which are sponsored by the State Board of Health.

Dr. L. W. Kibler, field director, Committee on Postgraduate Instruction in Obstetrics, Tennessee State Medical Association, made a short trip to Jackson during the first week in December.

The purpose of this trip was to discuss with Mr. Q. Edward Gatlin, organizer, Committee on Postgraduate Medical Education, details concerning the medical education program that has been carried on in the State of Mississippi for the past two years, in order to get information that would help the State of Tennessee to begin and carry on such a program efficiently.

Jackson, FELIX J. UNDERWOOD,
January 6, 1937. Executive Office.

THIRD DISTRICT HEALTH OFFICERS SOCIETY

The Third District Health Officers Society met in the City Hall, Clarksdale, Dec. 11, 2:30 P.M. In the absence of the president, Dr. L. B. Austin, Dr. N. C. Knight was elected as chairmen of the meeting. The minutes were approved as read. The next order of business being the election of a secretary for 1937, Dr. Knight nominated Dr. John W. Shackelford. The nomination was duly seconded; there were no further nominations, and Dr. Shackelford was, therefore, elected by acclamation. Dr. Shackelford then made a motion that the January meeting of the Society be indefinitely postponed, the next meeting to be held at the regularly scheduled time in May. The motion was seconded and carried.

Dr. H. S. Cottrell then made the following motion which was seconded and carried, regarding the banquet to be held by the Society at the May meeting: All heads of departments of the central office of the State Board of Health, all members of the State Board of Health, all officials of the Mississippi State Medical Association, all guest speakers, all out of state guests, shall not pay any banquet dues, provided, however, that no part of the foregoing motion applies to members of the Society; all others attending the banquet shall pay their proportionate part. The secretary was instructed to arrange a joint meeting of this society and other similar societies in the state, if such exist, for the May meeting.

Dr. George W. Mast, director of the Holmes County Health Department, and Dr. E. C. Gillespie, director of the Leflore County Health Department, were then elected to membership.

Dr. N. C. Knight, the presiding officer, then suggested that membership in the Society be extended so that all public health workers in the Third District might become eligible as "associate members." After considerable discussion of this suggestion, Dr. John W. Shackelford offered the following amendment to the constitution: All public health workers in the third congressional district who are employed by, or whose appointment is confirmed by, the State Board of Health shall become eligible as "associate members," provided, however, that all nominations for membership are to be made either by a health officer who is a member of the Society or by the president. The privilege and benefits of "associate members" shall be as follows:

1. They shall pay dues at the rate of $0.50 per year.
2. They shall be entitled to appear on the program at the invitation of the program committee, and shall be entitled to join freely in all scientific discussions.
3. They shall be elected to membership in the usual manner according to the constitution.
4. They shall not be entitled to hold office.
5. They shall not be entitled to vote.
6. They shall be entitled to attend business

sessions, except executive, but shall not be entitled to take part in any way in the business part of the society except by invitation of the president.

7. They shall be entitled to take part freely in all social benefits of the society.

The scientific session being the next order of business, same was entered into as follows:

1. County Health Department Ante-Partum Service.—Dr. H. B. Cottrell, Indianola, Miss.
2. Some Phases of Health Work in Tunica County, Mississippi.—Dr. W. H. Williams, Tunica.
3. Observations on the Recent Outbreak of Poliomyelitis in Mississippi.—Dr. George W. Mast, Lexington.

All papers were discussed generally by everyone present.

There being no further business the Society adjourned.

Clarksdale, N. C. NIGHT,
Dec. 21, 1936. Secretary.

COAHOMA COUNTY MEDICAL SOCIETY AND CLARKSDALE HOSPITAL STAFF

The Coahoma County Medical Society and the Clarksdale Hospital Staff met in the dining room of the Alcazar Hotel, Dec. 9, at 12 o'clock. Immediately after lunch the meeting was called to order by the president, Dr. J. A. Slack. He ordered the minutes of the previous meeting read, which were approved as read.

The chairman of the Relations Committee then reported that everything had gone along smoothly and nicely during the year.

The next order of business being election of officers for 1937, same resulted as follows:

President—I. W. Barrett, Clarksdale.
Vice-President—D. H. Griffin, Clarksdale,
Secretary-Treasurer—N. C. Knight, Clarksdale.

All officers elected by acclamation.

The scientific session was then entered into as follows: "Drugs Used in the Treatment of Heart Disease."—J. L. Levy, Discussed by Drs. Slack, Slaughter, Barrett, Wilkins, Hughes, and Warfield. Closed by Dr. Levy.

Dr. E. L. Wilkins then discussed methods of improving our attendance still further and it was generally agreed that between now and the next meeting we would see as many of the men as possible, who should be attending, and explain to them the importance of attending the Society meetings and each one of us would bring one of these men with us, if possible.

Dr. N. C. Knight then volunteered to read a paper at the next meeting. There being no further business the Society adjourned.

Clarksdale, N. C. KNIGHT,
Dec. 22, 1936. Secretary.

COAHOMA COUNTY MEDICAL SOCIETY AND CLARKSDALE HOSPITAL STAFF

The Coahoma County Medical Society and Clarksdale Hospital Staff met in the dining room of the Alcazar Hotel at 12 o'clock, Wednesday, Jan. 13. Immediately after lunch the president, Dr. I. W. Barrett, called the meeting to order and ordered the secretary to read the minutes which were approved as read.

The president then appointed the following men to serve as relations committee between the medical society and the Clarksdale Hospital: E. L. Wilkins, chairman; T. G. Hughes, W. P. Warfield.

Case reports being next in order, Dr. Wilkins reported an unusual eye condition, allergic, produced by use of dyes. Discussed by I. W. Barrett, T. G. Hughes, T. M. Dye.

Dr. N. C. Knight then read a paper which was discussed by D. H. Raney, I. W. Barrett, T. G. Hughes, J. L. Levy, W. S. Slaughter, E. L. Wilkins, and closed by N. C. Knight.

There being no further business the Society adjourned.

Clarksdale, N. C. KNIGHT,
Jan. 13, 1937. Secretary.

DELTA MEDICAL SOCIETY

As secretary of the society I feel that I am justified in stating that the society justified its existance in that we had the two regularly scheduled meetings during the year. These meetings in my opinion were up to our usual standard, if not a little bit better than some previous meetings. Our membership for the year was not the highest that we have had since the society was organized, but it was above the ten-year average.

During the year the society adopted a procedure which in my opinion will help to improve the society. The ruling was adopted whereby it became mandatory for the governing board to meet within thirty days after each meeting to formulate and outline plans for the next meeting. This, of course, should tend to make better programs on account of longer time for preparation.

The society at its April meeting adopted the resolution endorsing the State Park at Hollandale, Mississippi, particularly approving the provisions which envisioned the using of the warm springs for medical purposes. The policy was also adopted to have two discussors for each paper presented, thereby enlarging the activity on the program of the members of our society.

After you have assembled the data contained in this letter, I would appreciate any suggestions you have in reference to improving the meetings of our society.

Greenville, F. M. ACREE,
Jan. 2, 1937. Secretary.

HOMOCHITTO VALLEY MEDICAL SOCIETY

The Homochitto Valley Medical Society did this in 1936.

Meeting in Natchez, January 9, with 13 present.

Meeting in Natchez, April 9, with 14 present.

Meeting in Centerville, July 10, with a large number present.

Meeting on Lake St. John, Oct. 14, with 12 present.

At the January meeting Dr. Jarratt of Vicksburg was present and read a very interesting paper on "Pyuria in Children."

At our April meeting the ladies of the Auxiliary to the Homochitto Valley Medical Society, through invitation, dined with us, after which they returned and had their meeting. Dr. Hill, president of the State Association was present and gave us a fine address. At this meeting Dr. Ullman read a fine and beautiful eulogy to Dr. Philip Beekman, who passed away February 14, 1936.

On July 10, we had a wonderful meeting at the Field-Memorial Hospital at Centreville, through the courteous invitation of the Field brothers. Dr. W. L. Little, president-elect of the Mississippi State Medical Association, gave us a full address on the closer co-operation of the profession in Mississippi and Louisiana. Dr. Chaille Jamison of New Orleans read a paper on "Auricular Fibrillation." Dr. M. Gage addressed us on "Thyroid Disease," and all present agreed that these were two of the best addresses the Society ever had the pleasure of hearing. These fine learned men are more than capable of so addressing members of the medical profession.

On October 14, through kindness and invitation of Dr. James C. Rice, the genial senator and surgeon from Adams County, we drove over to beautiful Lake St. John to his cottage and there enjoyed a marvelous supper, as only Dr. Rice knows how to prepare and entertain.

Thanks to him so much for his good feeling and generosity. There has been for 1936 a fine feeling of fellowship and desire of cooperation between medical men and the different societies. Our members are alert to all possible future changes that may come in the course of time.

We lost three members, Dr. Philip Beekman, Dr. J. W. Chisolm and Dr. John Chamberlain, all of Natchez, during 1936.

As the five counties composing the Homochitto Valley Medical Society are now divided into county societies, the Homochitto Valley Medical Society now exists as a scientific society only. Whether a large society composed of several counties is best, or local county societies, will only be seen as time marches on. My personal opinion is that unless county societies can have a reasonably large membership, a large society composed of several counties is still the best.

Previous to the forming of the Homochitto Valley Medical Society we had county societies in our district. They did not fare so well.

It is well that the Mississippi State Medical Association and all component societies pay strict attention to legislation in Washington during 1937 that may have serious effect on the future welfare of medicine in the United States.

Natchez LUCIEN S. GAUDET,
Jan. 4, 1937. President.

ISSAQUENA-SHARKEY-WARREN COUNTIES MEDICAL SOCIETY

A regular monthly meeting of the Issaquena-Sharkey-Warren Counties Medical Society was held at the Mississippi State Charity Hospital, Tuesday, Jan. 12 at 7 P. M. After supper, the meeting was called to order by the president, Dr. G. C. Jarratt, with fifteen members and two guests present.

Papers and Discussionss

The Business Affairs of the Profession—Round Table Discussion.—Dr. S. W. Johnston, Vicksburg, leader.

Discussions by Drs. P. S. Herring, E. H. Jones, H. H. Johnston.

Precancerous Dermatoses (Lantern Slides). —Dr. J. K. Howles, University of Louisiana School of Medicine, New Orleans.

Discussed by Drs. P. S. Herring and S. W. Johnston.

A Case Report—Diabetes Mellitus.—Dr. Armstrong of the staff of the Mississippi State Charity Hospital.

Dr. Howles announced the New Orleans Graduate Assembly to be held March 8, 9, 10, and 11.

Programs for the year of 1937 were presented and adopted as follows:

February 9: ORTHOPEDICS. Committee —Drs. W. E. Johnston, chairman; S. W. Johnston, A. Street, D. A. Pettit.

March 9: EYE, EAR, NOSE, AND THROAT —Committee—Drs. H. H. Johnson, chairman, E. H. Jones, C. J. Edwards, Alston Callahan.

April 13: INTERNAL MEDICINE—Committee—Drs. W. K. Purks, chairman; L. J. Clark, P. S. Herring. H. B. Goodman, J. S.

Ewing, L. S. Lippincott.

June 8: OBSTETRICS AND GYNECOLOGY —Committee—Drs. R. A. Street, Jr., chairman; I. C. Knox, G. M. Street, J. A. K. Birchett, B. B. Martin, Jr.

July 13: PEDIATRICS.—Committee.—Drs. John H. Dent, chairman; G. C. Jarratt, W. P. Robert, H. B. Wilson.

August 10: PUBLIC HEALTH. Committee —Drs. F. M. Smith, chairman; A. K. Barrier, W. H. Scudder, T. W. Huey, H. S. Goodman.

September 14: UROLOGY. Committee— Drs. J. A. K. Birchett, Jr., chairman; G. P. Sanderson, A. Street.

October 12: SURGERY. Committee—Drs. W. H. Parsons, chairman; B. B. Martin, N. B. Lewis; S. W. Johnston, D. P. Street.

November 9: GENERAL PRACTICE. Committee.—Drs. W. C. Pool, chairman; G. W. Gaines, H. H. Haralson, W. A. Smith, M. J. Few, E. B. Stribbling.

December 14: ANNUAL MEETING.

Each committee is to make up its own program for the month assigned, this to include one invited guest speaker.

Dr. S. W. Johnston was elected advisor for the Woman's Auxiliary to the Issaquena-Sharkey-Warren Counties Medical Society.

Dr. E. H. Jones made a report of the clinic conducted at the Mississippi State Charity Hospital by the society.

The treasurer presented his report for the year of 1936 and an auditing committee was appointed to examine the report.

Dr. Henry S. Provine, Tallulah, Louisiana, was elected to honorary membership in the society.

NEWTON COUNTY MEDICAL SOCIETY

The Newton County Medical Society was organized in 1935. The membership includes every doctor with one exception. We meet six times a year and I think this year our meetings are going to be well attended as we have some good programs planned. Our idea is to put members of the society on the program as much as possible, and have subjects discussed which are familiar to all. We are also going to try to increase our membership in the State Association this year.

I will be glad to let you have a report of our programs every two months and will also try to send you a monthly letter for the Journal if anything of importance transpires.

Newton, DUDLEY STENNIS,
Jan. 1, 1937. Secretary.

PIKE COUNTY MEDICAL SOCIETY

The Pike County Medical Society held its regular monthly meeting, Thursday, Dec. 3, at 6:30 p. m., in the Palm Room of the McColgan Hotel. The annual election of officers was held. The following officers were elected to serve during 1937: President, Dr. B. J. Hewitt; Vice-President, Dr. J. M. Smith; Secretary-Treasurer, Dr. T. Paul Haney, Jr.

There was a motion introduced by Dr. Willis Cotten that the secretary be instructed to send news of the Society to Dr. Lippincott. This motion was passed unanimously.

A motion was introduced by Dr. T. E. Hewitt that the secretary be instructed to send a resolution to the Pike County Board of Supervisors stating the Society's approval of the Pike County Health Department and urging that the Board continue its cooperation in the health department program.

Dr. E. L. J. Zander, New Orleans, visited the Society for the purpose of presenting an outline of the New Orleans Graduate Medical assembly to be held March 8, 9, 10, and 11, 1937. The presentation of this assembly was received with enthusiastic interest on the part of all present. Following his presentation of the assembly, Dr. Zander presented a most interesting paper on the subject "Rupture of the Uterus." Following this paper an interesting discussion was made by several of the members present. The president extended appreciation of the society to Dr. Zander for his splendid presentations.

The following doctors were present, H. L. Bauer, R. H. Brumfield, L. W. Brock, Willis Cotten, W. C. Hart, T. Paul Haney, Jr., T. E. Hewitt, B. J. Hewitt, S. Paul Klotz, J. M. Smith. Visitors present were Dr. Zander, our guest speaker, and Dr. A. B. Harvey and Dr. J. J. Pittman, both of Tylertown.

McComb, T. PAUL HANEY, Jr.
Jan. 8, 1937. Acting Secretary.

PIKE COUNTY MEDICAL SOCIETY

The Pike County Medical Society held its first monthly meeting of the year 1937 in the sub-story of the Methodist Church in McComb. This meeting was called to order by the president at 12:45 p. m., Thursday, Jan. 7. A nice dinner was served by the Missionary Society of the Methodist Church. After dinner the president again called the meeting to order and the minutes of the December 1936, meeting were read by the secretary.

A motion was made by Dr. R. H. Brumfield that the paragraph of the minutes devoted to the visit to the Society by Dr. Zander of New Orleans be changed to include the purpose of his visit to the Society. This paragraph now reads.

"Dr. E. L. J. Zander of New Orleans visited the Society for the purpose of presenting an outline of the New Orleans Graduate Medical Assembly to be held March 8, 9, 10, and 11, 1937. The presentation of this assembly was received with enthusiastic interest on the part of all present. Following his presentation of the assembly, Dr. Zander presented a most interesting paper on the subject "Rupture of the Uterus." Following this paper an interesting discussion was made by several of the members present. The president extended appreciation of the Society to Dr. Zander for his splendid presentations."

The Secretary then presented the treasurer's financial report for the year 1936. This report showed a total income for the year of $297.47, total expenditures amounted to $181.32, leaving a balance on hand of $116.15. This balance was placed in the Mechanics State Bank to the credit of the Pike County Medical Society.

Dr. L. W. Brock then presented a motion that Dr. T. E. Hewitt of Summit be elected to honorary membership in the Society for the year of 1937. After the motion was duly seconded by Dr. S. Paul Klotz, the Society unanimously adopted same.

Eighteen of the twenty-two active physicians in Pike County paid their dues during the January meeting.

After all business was attended to, the president presented Dr. Isidore Cohn who presented a most interesting discussion on the subject, "The Early Diagnosis of Malignant Diseases." He accompanied his discussion with presentation of lantern slides showing various interesting pictures of certain cases of malignancy he had seen in his practices. Every physician present thoroughly enjoyed Dr. Cohn's presentations. Following his discussion the president extended the appreciation of the Society to Dr. Cohn for his splendid discussion.

The following physicians were present: H. L. Bauer, A. V. Beacham, W. O. Biggs, L. W. Brock, R. H. Brumfield, W. F. Cotton, E. M. Givens, T. Paul Haney, Jr., W. C. Hart, B. J. Hewitt, J. E. Hewitt, S. Paul Klotz, Thos. Purser, Gladys Ratcliff, J. J. Pittman, and B. L. Crawford.

There being no further business the Society adjourned.

McComb, T. PAUL HANEY, Jr.
Jan. 8, 1937. Secretary.

;TALLAHATCHIE COUNTY MEDICAL SOCIETY

The Tallahatchie County Medical Society met in its monthly session at Tutwiler, Thursday evening, at 7 o'clock. Those present were: Drs. Clay and Backstrum, Tutwiler; G. C. Denson, Vance; G. L. Biles, Sumner; R. D. Byars, Cascilla; C. F. Freedland, Glendora; Drs. Harris and Hightower, Webb; C. M. Pate, dentist of Tutwiler; Drs. Powell, Bardwell and Moody, Charleston. The out of town visitors were: Drs. Dye, Robinson, Knight and Wilkins of Clarksdale. It was an interesting meeting. Next meeting, Feb. 4, at Charleston.

Charleston, J. W. MOODY
Jan. 13, 1937.

TRI-COUNTY MEDICAL SOCIETY

The Tri-County Medical Society composed of Copiah, Lawrence, Lincoln and Walthall Counties, met quarterly this past year, one meeting being held in each of the counties.

All meetings started at 12:30 with luncheon followed by the business meeting and scientific program. Guest speakers included Drs. Frank Hagaman, Jackson; Willard H. Parsons, Vicksburg; John T. Sanders, New Orleans; Harvey F. Garrison, Jackson; and Dr. F. J. Underwood, Jackson.

Our membership reached a total of 34 with two other eligibles belonging to the Central Medical Society. This represents a membership of 78 per cent in the Mississippi State Medical Association, counting all practicing physicians and of course a larger percentage of physicians who are really eligible are counted.

All meetings were reasonably well attended with the members all taking an active part in the discussion of the papers.

The question of county societies was raised but by unanimous vote it was felt best to continue the Tri-County Medical Society as a component part of the Mississippi State Medical Association. One other county unit is being invited to join with us.

R. B. ZELLER, Secretary
Hazlehurst,
Jan. 4, 1937.

WILKINSON COUNTY MEDICAL SOCIETY

The Wilkinson County Medical Society held its regular monthly meeting on the second Thursday in December, at the Field Memorial Hospital, Centreville. It is the custom of this society to hold the election of officers at the November meeting, the officers immediately taking office to serve for one year; but due to the fact that we were having a post-graduate course in pediatrics during the second week in November, the regular November meeting was dispensed with, and the election was therefore postponed until December. Dr. J. W. Brandon, Woodville, was elected president, and Dr. Edwin M. Butler, Centreville, was elected secretary.

The next regular meeting will be held on the second Thursday in February.

EDWIN M. BUTLER, Secretary
Centreville, Jan. 5, 1937.

DESOTO COUNTY

A doctor in responding to a call at a negro cabin asked Aunt Dinna what was the matter with Uncle Ephraim, her husband. She replied, "I don't know eggactly, but he is lying at the pint of illness."

Ye county editor is at the Methodist Hospital, Memphis. He was nigh unto pneumonia, but is now much better, thanks to that able physician, Dr. Jas. B. McElroy, and several nurses of grace and ability. These leading a hospital like this lessen the miseries of any illness and it is good to be here in an institution like this. See so many folks worse off than yourself you take courage and go ahead.

With best wishes and more news next month.

L. L. MINOR, County Editor
Rt. 4, Memphis, Tenn.
Jan. 11, 1937.

FRANKLIN COUNTY

Claude McGehee, who is a pre-medical student at the University of Mississippi, spent the holidays with his parents, Dr. and Mrs. J. C. McGehee, Bude.

Dr. and Mrs. C. E. Mullins, Bude, spent a part of their holiday with the latter's parents in Clinton.

Mr. and Mrs. Sherrod Towns, Baton Rouge, spent one of their two weeks' vacation, during the holidays, with his parents, Dr. and Mrs. S. R. Towns, Quentin. The other week was spent in Birmingham, with the parents of Mrs. Towns.

The County Medical Society held its regular quarterly meeting in Bude, Jan. 5, at the home of Dr. and Mrs. J. C. McGehee, where a most enjoyable dinner was served. Those present were: Drs. Mullins, Bude; Towns, Quentin; Costley, Meadville, secretary; and McGehee, Bude, president. The next meeting will be held in Meadville with Dr. Costley as host.

S. R. TOWNS, County Editor
Quentin,
Jan. 6, 1937

HUMPHREY COUNTY

DR. J. C. HIGDON

Such feeling of sadness, regret, and shock is occasioned by the recent death of our friend, Dr. J. C. Hidgon that usual county events will not be given in this number. Our loss is depressing, and can be better expressed later.

J. W. JACKSON, County Editor
Belzoni,
Jan. 5, 1937.

LEFLORE COUNTY

Dr. E. R. Meek, Glendora, attended the staff meeting of the Greenwood Leflore hospital, Thursday night, Dec. 3.

Drs. J. R. Hill, Corinth, and P. W. Rowland, University, passed through Greenwood Dec. 8, on their way to Vicksburg to attend the meeting of the Issaquena-Sharkey-Warren Counties Medical Society.

We are sorry to report that Dr. W. E. Denman has been very sick with pneumonia since Dec. 11. He is now very much improved, but has decided to take a rest. He is recuperating at State Sanatorium. While sick Dr. Whit Rowland, Memphis, came to see him, also Dr. W. E. Seale, Crenshaw and Dr. Henry Boswell. W. E. Denman, Jr., who is attending the Medical Department, University of Tennessee, spent the holidays at home.

Dr. A. A. Watts, Gary, Indiana, visited Mr. and Mrs. B. Threadgill, Dec. 13.

Dr. and Mrs. L. A. Barnett have returned from Vanderbilt, where the doctor has been taking a post-graduate course, three months.

Dr. Tate Carl, Greenwood, now pathologist at Gaston Memorial Hospital, Memphis, was married in Memphis, Dec. 19, to Miss Dora Bishop, graduate nurse of University Training School for Nurses, Memphis.

Dr. C. H. Haywood, Fulton, Ky., visited in the home of Mr. W. Mayerhoff, Itta Bena, Dec. 19.

Dr. A. L. Emerson, Jr., Hernando, was in Greenwood, Dec. 20.

Dr. and Mrs. J. C. Pegues, Rosalie, Jim, and John, went to Atlanta for the holidays. We are sorry to lose the doctor and his family from Greenwood as the doctor will be associated with Dr. R. N. Balyeat, Oklahoma City, after Jan. 1.

Dr. Charles R. Gillespie has been appointed health officer for Adams County, and has gone to Natchez to assume his duties.

Dr. J. C. Adams and family spent Xmas in New Orleans.

Dr. G. Y. Gillespie, Jr., spent Xmas day in Duck Hill, with his father.

Dr. J. A. Crawford went to Philadelphia for Xmas.

Dr. F. M. Sandifer, went to New Orleans to see his son, Dr. F. M. Sandifer, Jr., during the holidays. Dr. Sandifer, Jr., will be associated with his father in practice after Jan. 1. We welcome him home.

Dr. and Mrs. W. D. Wilson, Schlater, announce the marriage of their daughter, Katherine, to Mr. T. V. Jones at Winona, Dec. 19, 1936.

W. B. DICKINS, County Editor
Greenwood,
Jan. 2, 1937.

DR. S. A. MAJURE

Dr. S. A. Majure, of Hickory, departed this life, Dec. 8, 1936, age 75 years.

Most of his medical life was spent in Neshoba and Newton Counties.

Mrs. C. N. MAJURE

Hickory,
Jan. 11, 1937.

PIKE COUNTY

I am enclosing copies of the minutes of the Pike County Medical Society for the last two meetings. I wish to say also that the Pike County Medical Society started the New Year with a most interesting meeting that was splendidly attended as you see from the minutes.

During December four Pike County physicians attended the Conference on Veneral Disease Control Work which convened in Washington and was called by the United States Public Health Service Surgeon General, Doctor Thomas Parran. The physicians attending this conference were Doctors S. Paul Klotz, McComb; W. Otis Biggs, Osyka; John M. Smith, Magnolia; and T. Paul Haney, Jr., McComb, health officer of Pike County. Every physican attending stated the conference was most worthwhile and very beneficial.

You will note when the annual report of membership is published that Dr. A. V. Beacham has joined the Pike County Medical Society. He has opened an office in Magnolia.

You may expect receipt of the minutes of each meeting soon after the first Thursday in each month during 1937. I shall also endeavor to submit to you other news of physicians in this county and their families.

T. PAUL HANEY, JR.,
County Editor

McComb, Jan. 8, 1937

PRENTISS COUNTY

The Prentiss County Medical Society at its January meeting invited the Northeast Mississippi Thirteen-County Medical Society to meet with us in Booneville March 16. They graciously accepted and we plan to start the year off in high.

Dr. S. L. Pharr is doing some work after being laid up for several weeks from injuries in an automobile accident. He says that driving and sleeping at the same time is unsatisfactory.

Dr. Kostmayer, dean of Tulane University Graduate School of Medicine, was a recent visitor to Drs. McDougal and Pharr.

Prentiss County doctors are the first of the Thirteen-County Medical Society to pay up 100 per cent dues in 1937.

Dr. A. G. LeRoy was recently married to Miss June Beene, of Sequatchie, Tenn. Mrs. LeRoy will be an appreciated addition to the Woman's Auxiliary in Prentiss County.

Dr. and Mrs. Luther McDougal, Jr., Providence, R. I., are the happy parents of a daughter, born Dec. 10. Her name in Joan.

Several of our doctors are contemplating attending the Mid-South medical meeting in February, at Memphis.

L. L. McDOUGAL, Jr.,
County Editor

Booneville,
Jan. 11, 1937.

TALLAHATCHIE COUNTY

Dr. J. E. Powell, Charleston, spent a couple of days in Memphis last week. The doctor does not tell his business, but I think he goes to Memphis and spends a couple of days with his daughter. occasionally, so that he can sleep with both ears covered as he knows that he is out of hearing of those nightly callers and of his telephone.

Dr. D. G. Bardwell has not been so well but keeps hustling. He operates a drug store, a general store and practices medicine, so you can see that he has not time to say in. The doctor does love to go duck hunting but he and I are in the same class, we usually come back with a hard luck story. He says that he believes he could do better after the duck season closes, as there are not so many fellows to flush his covey but he says he is afraid of these d— game wardens.

Dr. A. C. Harrison and Dr. W. E. Jenkins are on the sick list but are not continuously confined to the house.

We have been having quite a spell of bad weather with lots of rain. The Tallahatchie river is on a rampage. Many people are having to move out of the Tallahatchie basin. Indications are that the river will go much higher than at present. The highway between Charleston and Summer is still open but it is feared it will soon be inundated.

Mr. Frantie O'Shea and wife are moving from Charleston to Helena, Ork., where Mr. O'Shea has accepted a job with one of the rubber companies. Mrs. O'Shea is a daughter of Dr D. G. Bradwell of Charleston.

The writer spent a part of the holidays in Sharkey County on a deer hunt. While on a stand, hearing the dogs coming close, I was looking for the deer t ocome out leaping, but instead I looked out in about sixty-five steps and saw a very large buck slipping out like an old buck rabbit. Well, you know about what happened, as I had not killed but one deer in my life when I was about sixteen years of age. The deer was coming straight to me in open woods but I was with such great surprise, when I looked and saw it so close, until the first thought was to shoot him in the head. I just knew I could kill him, but that deer wheeled before I could blink my eye and away he went. I was so surprised that he did not fall until I forgot that I had some shells in my automatic. Such is deer hunting.

Dr. J. D. Biles, Jr., Summer, who was recently connected with the hospital at Parchman, has been in Europe for several months. I understand he is on his way home, Jimmie, as he is known around home, is a very bright young physician, well equipped in his profession. He graduated at John Hopkins and took his internship up there. We predict, for him a bright future.

The writer visited Poplarville the latter part of December on business and visited home folks.

Dr. Leon S. Lippincott of Vicksburg, who is known to most every physician in the state and to all the hospitals, especially to all who are members of the State Hospital Associationon, always sleeps with one eye open. You just can't get by him. Dr. Lippincott is secretary for the State Hospital Commission and a good one. He is courteous and obliging but you must do things according to rules and regulations, when it comes to rendering your reports of that keen eye will catch it. He has a great responsibility and I take off my hat to him as being one of the best in the state when it comes to doing things in the right way and on time. Dr. Lippincott is secretary of the State Hospital Association and to him, is due, the credit of Mississippi having one of the best associations of the United States. We admire Dr. Lippincott for his untiring efforts in the development and placing of the hospital business of Mississippi on a high level.

Miss Marguerite Ward, Summer, who has been on the nursing staff, of the Charleston Hospital for two years resigned to enter training at the Jackson Infirmary. Miss Richardson, a recent graduate of the State Charity Hospital of Jackson, replaced Miss Ward at the Charleston Hospital.

Miss Merle Gordon, who is head nurse at the Charleston Hospital, spent the holidays with friends in Jackson and her parents in Vivian, La. Miss Gordon is a graduate of the State Charity Hospital in Jackson and a former employee of the Walley Hospital of Jackson.

Miss Mary Pharr, who has been on nursing staff for four years, spent a part of the holidays in Philip, Greenwood, and Memphis.

We wish, for all connected with the Mississippi Doctor, a very happy and prosperous New Year. The Mississippi Doctor is a splendid medical journal and if the physicians of the state will cooperate we will have one of the best journals being printed. Send in anything which will help out. I am not an editor from this county but I want to help out as best I can.

J. W. Moody,

Charleston,
Jan. 13 1937.

WARREN COUNTY

During the recent annual holidays Dr. W. H. Parsons visited Dr. Tom Sparks, now located in Newellton, La.

Dr. Pierre Robert and family, during the Christmas holidays, took part in a happy family reunion, held in his sister's home on the campus of Washington and Lee University, Lexington, Va.

One of the guests at the January staff meeting of the Vicksburg Infirmary was Dr. Boyd Edwards, from Edwards.

Last month an ineffaceable and unmitigating stroke of sadness came to the heart and home of Dr. Sydney Johnston, who experienced in the death of Mrs. Annie Easterling the irreparable loss of a devoted sister and one for whom he and his entire family hold a sacred adoration.

Stanley Lippincott, young son of Dr. and Mrs. Leon Lippincott, was seriously injured while playing with his pony. The pony kicked him over the right eye, and we are advised that this blow did injury to the outer table of the skull. Reports from the hospital today are that he is doing nicely.

"Some are born great, some achieve greatness, and some have greatness thrust upon them." However, this may be, on January 4, 1937 at 9:10 a. m., William Kendrick Purks, Jr., "at the door of life, by the gate of breath," entered the home of Dr. and Mrs. W. K. Purks, of Vicksburg, as the reverent Eminence, to affectionately place on the brow of these the crown of parenthood.

This little ambassador, having performed his coronation ceremonies was placed on his parents' knees, a naked newborn child, weeping lustily while all around him smiled. Adoring parents and friends silently, unconsciously, yet fervently prayed that this babe might "so live, through the long years, that when sinking into his last long sleep, calm, serene, would be his smile, while all around him, others affectionately, sorrowfully weep."

H. T. IMS, County Editor

Vicksburg,
Jan. 12, 1937

WASHINGTON COUNTY

The many friends of Dr. T. B. Lewis will be grieved to learn that he recently sustained a fracture of the hip while he and Mrs. Lewis were visiting their daughter, Mrs. Jimmie

Franklin of Jackson. He was accidentally struck by an automobile but managed to save his 4 year old granddaughter who was accompanying him on a stroll. He was given treatment at a Jackson hospital but has returned to his home in Greenville where his recovery is progressing satisfactorily.

Dr. and Mrs. L. C. Davis enjoyed a holiday visit with relatives of Mrs. Davis, Mr. and Mrs. W. F. Wheatley, and their son Forsythe, Jr. of Jackson, and Mrs. Parker Wheatley of Greenwood.

Dr. and Mrs. Vance Murry, Greenville, were visited New Year's day by Dr. Murry's father, Dr. C. M. Murry, and his sister Eudora, of Ripley.

Dr. H. A. Gamble attended the meeting of the Southern Surgical Association which met this year at the Edgewater Beach Hotel, Edgewater Park.

A newcomer to the Gamble Bros. and Montgomery Clinic is Dr. W. C. Spencer who succeeds Dr. J. C. Pegues. Dr. Spencer recently completed postgraduate work at the Wilmer Eye Institution of John Hopkins. He will assist Dr. D. C. Montgomery and give special attention to diseases of the eye.

Dr. J. C. Pegues and family were in Greenville recently to say farewell to their many friends here, All of whom wish them success and happiness. Dr. Pegues goes as rhinologist to the well known allergy clinic of Dr. R. M. Balyeat of Oklahoma City, Okla.

Dr. and Mrs. Frank Acree entertained Memphis friends, Mr. and Mrs. Ray Plyler, during the holidays. Dr. Acree reports that Frank, Jr., age 3 months, enjoyed his first visit from St. Nick.

Dr. and Mrs. J. F. Lucas, their young son and daughter visited the youngster's grandparents, Mr. and Mrs. O. K. Gee of Carrollton, during the holidays.

Dr. Charles Berry, who has been with Gamble Bros. and Montgomery since July, visited his parents at Senatobia, for a few days during the Christmas season.

Dr. and Mrs. J. B. Hirsch were glad to have their son, Jerome, Jr., wtih them during the Christmas vacation. Jerome is a premedical student at Tulane.

Other students who were in Greenville for the vacation were Mr. Lyne Gamble, son of Dr. and Mrs. H. A. Gamble, a junior medical student at Vanderbilt; Tom Beals of Georgia Military Academy, son of Dr. and Mrs. J. A. Beals; and Cameron Montgomery, Jr., of Woodberry Forest School, Woodberry, Va., son of Dr. and Mrs. D. C. Montgomery.

Dr. John Shackelford, health officer of Washington County, spent the holidays with his parents in Carrollton.

Dr. Shackelford reports that his associate, Mr. Chas. J. Powell has recently entered upon a three months' fellowship course in sanitary science at Vanderbilt University.

Washington County is pleased to learn from Dr. Shackelford that there has been a notable decline in the death rate for this county over the past five years. The decline has been greatest in diphtheria, 75 per cent, typhoid fever, 60 per cent and infant birth mortality, 15 per cent.

Greenville, J. A. BEALS,
Jan. 6, 1937. County Editor.

WINSTON COUNTY

Dr. and Mrs. Kemp, Sanatorium, spent a few days with their parents and friends here last week.

Dr. and Mrs. W. W. Parks spent one day in Meridian last week.

Dr. T. C. Suttle, Betheden, was on the streets here this week.

Dr. H. B. Watkins, county health officer, was on the streets this week trying to surpress a mad dog scare, ordering all dogs unmuzzled shot. We have had two or three rabid dogs at large.

Dr. E. L. Richardson, with several others, had a fox chase last week, reporting a great race.

The doctors of Winston County were unable to attend the meeting of the medical society at Meridian, being closed in by bad roads. There were several of us expecting to go.

Mr. and Mrs. E. N. Ballard, Starkville, spent Christmas with their parents, the writer and his family.

Louisville, M. L. MONTGOMERY,
Jan. 1, 1937. County Editor.

HOSPITAL STAFF TRANSACTIONS

The staff of the Charleston Hospital met in regular session, in connection with the medical society, at Tutwiler, Thursday, Jan. 7, with all members present except Dr. J. D. Biles, Sumner.

These meetings are interesting from the standpoint of case discussions as most of the doctors present submit patients to the hospital, some of which are interesting and all present profit from the discussions.

Charleston, Jan. 13, 1937. J. W. MOODY.

HOUSTON HOSPITAL STAFF MEETING

"Nursing Profession."—Dr. W. H. Anderson, Booneville.

It is an honor and a distinction to be asked to read a paper at the staff meeting of the Houston Hospital. We feel especially honored tonight. Would that we could do justice to this occasion. From the beginning, this hospital has taken the lead in medical progress, stood at the top in good service. The local set-up in this town, in this hospital, is the best we know for any small town in the state. To have four all time men with offices in the hospital is unusually good. This plan makes the patient safer and gives him much assurance. One man for surgery, one for eye, ear, nose and throat, one for internal medicine, and then the dean of Mississippi radiologists, make a wonderful set-up. It gives good coverage to the field of medicine and surgery and divides the work sufficiently to give efficiency and yet does not parcel it to the point of narrow specialization. It makes for a safe and sound middle ground for the people and insures a more portable load for the working team. It has always appeared to us that the Houston Hospital organization glides with greater ease and efficiency than almost any other we know. To hear the click of this organization and to see the graceful turning of its wheels is always of material benefit and it never fails to inspire us to greater effort. The nursing atmosphere is refreshing. Behind it you can see professional dignity coupled with efficiency and personal friendly interest.

We like to come to the Houston Hospital because it gave birth, its staff did, to *The Mississippi Doctor* and because is has done so much more than any other hospital in the state to give it financial sustenance.

We are especially glad to be here tonight because you are to do honor to a member of the nursing profession, the right arm of the medical fraternity. You are not just doing honor to a member of the nursing profession, but to a special member, one efficient and deserving, one in which we and the Northeast Mississippi Hospital feel a special interest, Miss Annie Laura Sanders. She is outstanding in her profession in this state. She is able in intellect, but not too able; she has executive ability, but is not ruled by sternness; she is tender of heart, but not too demonstrative; she is well grounded in the principles of nursing; she has culture and refinement and is well read. She quite well typifies the ideal which the entire profession is striving to exemplify. And now being the regular fellow that she is in the profession she has fought and lost to the greatest power on the earth, according to the Apostle Paul in the last verse of the 13th chapter of First Corinthians. But a prisoner under the influence of this power should have nothing to regret.

It is an ill wind that blows nobody good. The Crimean War had a cause perhaps for which it was fought. Whether this cause won or lost we do not bother to recall. But we can not forget that it was the occasion on which the modern nursing profession was born and was dedicated to the service of the suffering. "The greatest among you shall be servant of all." Service, the index to greatness, had been proclaimed more than eighteen hundred years previously. But it had not been practiced in such a practical way in this form of organized effort before. The mother of this service had studied, had applied herself well. After being so well born, the opportunity came and she was ready. She used her culture, refinement, broad and liberal education, her accumulated judgment and wisdom of thirty years, her wealth, to found a profession that has grown and developed rapidly, one that has been activated by its own unselfish deeds. Florence Nightingale gave much to this cause. She gave herself devotedly. She was the angel of mercy to the wounded soldier. The sick of the earth were found to be hungry for sympathy and service. So in a very short time the nursing profession of today was here to stay.

Before the days of Florence Nightingale there was but little unity of purpose and the nurses themselves were not generally looked upon as the best in education, culture and refinement. She set the standard, one that has lasted nearly a century and still the goal has not been reached altogether. Her family was one of wealth and station and education. The urge to service in this field came into her heart early when she was a mere girl. The family could not agree to the idea. She was given the opportunity of a very liberal education for the purpose of leading her away from this ambition. Like Abraham Lincoln she read and studied and took advantage of every opportunity. She kept ready. She held her eye on the vision. After she was thirty years of age the opportunity came.

The nursing profession has grown and developed as has the medical, which has made more progress within the last century than in all other time combined as far as history records. The statisticians tell us now that the nursing profession is badly crowded. This is true, no doubt, to a certain degree. The Florence Nightingale type will be in demand, however, for a long while yet, the woman of station, character and education. We have heard that the medical profession was crowded. It is, but if all the medical service was rendered that is really needed, we would be far short in numbers. The nursing profession is indispensible. It it too true that we do not have many specifics for many diseases. Nature must be given a chance. The proper rest, diet, bed comforts, and fresh air enable the patient to regain his health. The old custom of sitting up with the patient by the neighbors is on the wane. It is well that this is true. The method was always poor at its best. The world is too busy trying to keep up with rapid progress in medicine to have time to sit at the bed side and observe the patient and to do the nursing.

We have had enough to say about the qualification of the young woman entering training. But even so we would say again that the earnest desire to serve is the most important qualification.

There is quite a difference of opinion now as to where the nurse should take her training. The large hospitals seem to think that the number of beds is the requirement of greatest importance. The small hospital frequently gets a drubbing for even trying to operate a training school. Days, hours, numbers, and graphic charts constitute their nursing Bible. Upon these important essentials they are qualified and are recommended to the profession. Personally the superintendent would not know the nurse perhaps if she should meet her in the hallway. Personally she does not know about her endowed qualifications, she does not know about her training, her interest in the profession, her ability to learn facts, her power of application, her resourcefulness in meeting emergencies. For more than ten years now we have had a definite system in mind on medical economy. Through every avenue possible we have preached the system persistently, The major plank in the platform has been the development of the small hospital, which would in turn lead to the decentralization of the medical profession and would raise its standard of efficiency many times. It would bring education to the busy practitioner, and in turn give better medical service to the masses at less cost. Along with this it would train many young women for nursing service. We have at the same time advocated an affiliation between the small institution and the large, between the practitioner and the specialist. We believe this plan is of mutual benefit.

We would like to make it plain that the small training school has as many advantages as the large. If there be a difference we would decide in favor of the small hospital training school. We shall always recommend the graduate of the small school to seek further training in the large institution; we would unreservedly recommend the small training school to the graduate of the large for a post-graduate course. In the small school the nurse has a better opportunity to know the patient in all of his relations to life, to study his reaction to the disease from the beginning to the end. She is taught to individualize, to study the patient as well as the disease, to meet his likes and dislikes. She knows more about the workings of the hospital, the different items of expense, how and from where these are obtained. She becomes thoroughly familiar with the plan of treatment of one man, or a few men, for many diseases. In the large hospital the nurse becomes more expert on chart lines. She becomes more expert in remembering the number of the room and the number of the patient. She knows but little of the expense and soon learns to care less. She sees multiplied numbers of patients, but straightway forgets the number. She sees a hundred methods, as each doctor must do something different, but she can not have the time to study out and remember each one. Her mind at once turns to the field of specialization. The nice doctor at the head of the service may decide her choice. She learns to be a good finesse-er in the department she does not like. A haughty, independent, sarcastic attitude toward the patient with the ability to waste enough to run another hospital seems to be too common in too many large hospitals. But after all, the pebbles knock off their rough corners by rolling down the stream and bumping each other. So the wide contact with others, and even the mere acquaintance with so many diseases gives nursing polish and broadness of education that the young woman graduating in the small hospital needs. We might just say in passing that when you employ the nurse who has had her training in the big hospital and no experience in the small one, you should allow about one year for her to unlearn some of the things that will demolish your bank account and drive away your business. So please do not feel discouraged if you have had your training in a small hospital. But yet do not think of yourself more highly than you should think. The contact with multiplied people is a fine deceit killer.

Now for the next hour or two I would like to discuss with you rather pointedly some opportunities still left to the crowded nursing profession—I mean in addition to the opportunity of which the popular and accomplished Miss Sanders availed herself and what it would mean to the nursing profession, the doctors, to scientific medicine, and in service to the people. One is *call nursing,* nursing by the hour. You have a patient operated for acute appendicitis. Your hospital is a bit crowded, or the patient's funds are running low. The ambulance needs a little trade, the patient is homesick. You send him home in the ambulance, the nurse goes along and fixes him comfortably. The next day she gets in the hospital car and goes to see him, gives him a bath, takes out the stitches perhaps, sees just how he is, and reports back to the surgeon. She charges a small fee. She has done more for the patient than the surgeon would have done. She has charged him less. The surgeon has had the early morning hour to study up on a new operation that means a lot more to him in turn to his clientele. If the hospital nurse is not used, the surgeon might have a follow-up nurse for this special service. This is an opportunity for a few more nurses, and a chance to give better service at less cost. But now a step further and to the real thing I want you to think about. A nurse graduating from the Houston Hospital, I think, should be better qualified than others in the state for this field of service because you have your main staff in your hospital and your nurses. I am sure, more than the average is learned about office nursing, office service combined with the regular routine nursing. This is the slogan, "for every practitioner a nurse", even married practitioners and all. This would take about seventy-five or a hundred thousand out of the crowded profession, out of every-day, ordinary, routine nursing. This plan will give employment to the idle nurse. It will increase the net income of the practitioner, and it will furnish a service to the people for which they will be duly thankful. *For every practitioner a nurse.* This is no fancy. It is the way to medical progress. It is the route to better service. It is the plan for each doctor to increase his income. It would be a great preventive measure of state medicine. We have wondered why our own Dr. G. S. Bryan could be so well informed on all medical problems, so well versed on all that is known in modern diagnosis and treatment. We know one of the reasons, his office nurse. She may not be a graduate, but much better informed than many of them.

Cancer is the major enemy of man. We do not know the cause. We can do something toward a cure if we begin early enough. The preventive measures should be used before there is any sign of real activity. It is possible to do this in some cases. If we examine the cervix and uterus of enough cases we will learn to diagnose the potential cancer case. One of the greatest steps forward that can be made at this time is for the practitioner to take and keep a good history of his patients, a record of his treatments, and to follow them afterwards. You must know a patient in all of his relations to life if you are to do the best part by him. Many medical problems would be solved even now, that are not, if we just knew all that the family doctor knows. He has been unable to study his cases as he would like. He could not keep the histories as he should. No one thing would count for progress in medicine, for economy to the people like a thorough examination for every patient that comes to the office. At least some of the essentials. A look at the teeth and tonsils, the blood pressure; an idea about the heart, its rate and rhythm; a blood smear; a urine analysis, if a female, a catheterized specimen; and an examination on the table, a look at the cervix if there is any history whatever of menstrual disturbance, and even if there is not, it is well to make it. Just get the habit. Make the examination to acquaint yourself with the normal and to help you differentiate the abnormal before it is too late. Good obstetrics is the crying need of the day in the rural community. Above everything, every prospective mother should be weighed every three weeks, her blood pressure taken and kidneys examined. No doctor can do his practice as it should be done without a graduate nurse or her equivalent to help him. She can help you to keep up with the cases of pregnancy, keep up with the weight, make the urine test, talk to the patient about her diet, and inform her on good hygiene. When the pains start you can go and make your examination and leave the nurse to call you when you are needed. If you have a laceration she can help you in its repair at the time when it should be done. You must have her in your office if you are to examine your patients as you should, and be on guard for cancer in the female. She can go to see your very sick patient, give a bath, an alcohol rub,, a colon flush, note the symptoms, for an hour or two. This will help you more than you can imagine, and it will be deeply appreciated by the patient. If you have a case difficult to diagnose, twenty-four hours by her bedside with a history and temperature chart, a progress sheet, by your nurse, will be very valuable to you. We are not talking to you about a pet theory, we are telling you some things from actual experience. If you feel that you are not doing for your patients what you would like to do, think of a registered nurse in your office. If you feel that you would like to do more to help discover the cause of some diseases not yet known, think of the nurse as a helper. If you feel that it is important to make thorough examination of each patient that comes to see you, think of a nurse as a helper. If you are sure you need to do better obstetrics, think of a nurse to go with you on every call and to help you watch your cases afterwards. If you are worried about state medicine, think of a nurse to help you give such good service that there will be no demand for it. If you are interested in practicing preventive medicine and getting pay for it, consider a nurse in the organization, an all-time nurse paid a salary. If you need to increase your income, consider a nurse to help you educate your people to pay.

I hope I have introduced a subject upon which you will think seriously. We trust your thinking will lead you to action. If it does you will be delighted.

Now please allow me to congratulate the Houston Hospital on its medical set up, on the well equipped hospital you have, on the fine training school you are conducting, on your well-organized staff meetings. Let me commend you for this token of appreciation for your head nurse who is so worthy and who has given you such efficient service. Let me thank you for your invitation.

VICKSBURG SANITARIUM STAFF MEETING

A regular monthly meeting of the Vicksburg Sanitarium was held Monday, January 12, and after a supper served at 6:30 p.m., was called to order by the president, Dr. George M. Street, with twelve members and three guests present. The program included:

Reports from the Records Department and Analysis of the Work of the Hospital.

Report of Vital Statistics.—Dr. F. Michael Smith, Director, Warren County Health Department.

Special Case Reports:

1. Carcinoma of the Rectum.—Dr. A. Street.
2. Abscess of the Throat With Tracheal Obstruction Occurring One Week After Tonsillectomy.—Dr. J. A. K. Birchett, Jr.

Demonstration of Selected Radiographic Studies: Cyst of Mandible; Carcinoma of Bones of Thorax, Metastatic; Subdeltoid Bursitis; Renal Tumor; Urinary Tract for Discussion; Carcinoma of the Colon.

Three-Minute Reports of the Literature of the Month.

Gordon's Test In Hodgkin's Disease.—Dr. Leon S. Lippincott.

The next meeting of the staff will be held Wednesday, February 10, 1937.

ABSTRACT—CARCINOMA OF RECTUM

A. Street, M.D.

Patient.—White, male, age 50; married; merchant; admitted to Sanitarium, Oct. 20, 1936.

Chief Complaint.—Abdominal pain, worse before defecation and recently very much worse and more persistent. Can hardly get a bowel movement at all. Purgative increase the pain and make him very sick.

Present Illness.—Onset three years ago. First noticed a constant desire to go to stool. When effort was made to have a bowel movement, only a little bloody mucus was passed. Much tenesmus. Was treated for various conditions during this time, mostly for amoeba histolytica and the physician who treated him states that he has observed improvement in this patient following emetine treatment.

Previous History.— Influenza in 1918. No typhoid; no diarrhea. Tuberculosis of cervical nodes in 1914. No venereal disease. Does not use alcohol or tobacco.

Family History.—Father died of nephritis at age of 56; mother died of angina pectoris at age 77. Has brothers and sisters. No tuberculosis; no cancer.

Physical Examination.— Well developed poorly nourished; appear weak and ill. Blood pressure systolic 128, diastolic 95. Pulse 90; respiration 18. Aside from the local findings the physical examination showed nothing remarkable. Abdominal wall thin; very little distention; persistalsis can be observed, apparently in distended large intestine. No palpable masses. Some low abdominal tenderness.

Physical examination of rectum showed nothing abnormal. Sigmoidoscope passed and met and obstructed between five and six inches up the rectum, where a large cauliflower like mass was observed. Tissue was removed for biopsy. Involved portion of rectum seemed to be fixed.

Fluoroscopic examination showed an area of very narrow lumen, about 1½ inches long in the recto-sigmoid region.

Examination of tissue removed at biopsy (Dr. Lippincott) showed adeno-carcinoma, Grade III.

Blood Wassermann was negative; routine blood and urine examinations showed nothing remarkable.

Procedure.—Nonresidue diet. 500 cc. of citrated blood was given by transfusion shortly before the operation, on Oct. 24.

Operation.—Low median incision. Liver palpated and no metastases found. Large non-inflamed Meckel's diverticulum ileum. Pelvis showed a large mass, involving rectum from just above bladder reflection to top of sacral promontory. There was acute pelvic peritonitis and lifting of small intestine from pelvis exposed one pocket of cream like pus. Adjacent retroperitoneal tissue thickened and indurated, fixing the rectum to it. Growth seemed to extend backward toward sacrum. The urinary bladder was free. On considering choice of procedure, colostomy, preliminary to later resection, seemed then inadvisable because previous experience had shown that pelvic suppuration would probably continue and operability would be less later than at present. Immediate resection presented great operative risk and little assurance of permanent cure. However, without resection the patient would be in an intolerably miserable condition for the remainder of his life. The situation was explained to the family physician and to relatives and immediate resection was advised and agreed to.

The sigmoid was divided with the cautery between clamps and the proximal end brought out through a stab wound in the left lower abdomen for permanent colostomy. The peritoneum was incised laterally to induration at the level of the sacral promontory and the retroperitoneal space entered by blunt dissection well down to sacrum. The superior hemorrhoidal artery was ligated and divided. The left ureter was exposed at the brim of the pelvis and followed into the indurated mass. It was tediously dissected away to a point below the mass. The right ureter was exposed and found to run along the border of the indurated tissue so that its complete dissection was not necessary. The fingers were then carried down along the hollow of the sacrum mobolizing the rectum and indurated tissue on each side. The lateral peritoneal incisions were joined at the recto-vesicle fold and a good stump of uninvolved rectum was freed below the mass. This was divided with the cautery and inverted and the resected segment of recto-sigmoid removed.

The resection was so wide that there were no peritoneal flaps to bring together. The left ureter was placed under the left cut edge of peritoneum and the pelvis entirely filled with rubber-covered gauze drains, each of which brought out through the abdominal wound. This left very little wound to close. The clamps were left on the colostomy ends.

Post-operative.—The operation was well tolerated. Intravenous glucose and saline were given in adequate amounts. A second transfusion of 500 cc. of citrated blood was given on the fourth day. The clamps were removed from the colostomy on the fourth day and it functioned well. The last of the cigarette drains was removed on the 14th day and the cavity was subsequently kept packed with sterile gauze until it was too small to do so. Patient was able to walk five weeks after and was discharged from the hospital six weeks after operation.

Subsequent.—He reaurned to the clinic on January 7, 1937. Had gained 34 pounds in weight and seemed in excellent condition. The operative wound is completely healed. He removed mucus from the lower rectal stump by inserting an anema tip into the anus as necessary. He controls the colostomy without soiling his clothes by an ingenious device which I intend to describe in detail at a later date.

Tissue Pathology. — Adeno carcinoma (Grade III). Ulceration; acute purulent hemorrhagic exudate. Considerable chronic inflammatory; considerable fibrosis. Some granular necrosis. Growth invades muscle and outer coat. Perirectal tissue shows acute purulent flammatory, granulation tissue, considerable chronic inflammatory, no cancer.

ARSTRACT: ABSCESS OF THE THROAT WITH TRACHEAL OBSTRUCTION OCCURRING ONE WEEK AFTER TONSILLECTOMY

J. A. K. BIRCHETT, JR., M.D.

PATIENT:—Colored, Male, age 40; railroad laborer.

PRESENT COMPLIANT.—Difficult breathing. Unable to swallow; sore throat; chills and fever.

HISTORY OF PRESENT COMPLAINT.—One week ago had a local tonsillectomy elsewhere. Following the operation there was much pain and discomfort and a tendency to post-operative capillary bleeding from the tonsil fossae. Three days after the operation, returned home; continued to have discomfort with throat. The symptoms became so aggravated and he was so alarmed about not being able to breathe easier, and because of the intense pain in his neck, he presented himself in the out-patient department for treatment.

PAST HISTORY.—General health good. No history of chancre; had gonorrhea 20 years ago; no severe illnesses; no accidents. Eight months ago, while at work, had a rather sudden acute stabbing pain in the back, later resulting in the loss of the use of both of his legs. He was off from work several weeks until there was a return of sensation and function of the limbs. He was almost completely over this disturbance when it was thought advisable to have his tonsils removed, as they showed evidence of chronic focal infection.

PHYSICAL EXAMINATION.—Well developed and nourished negro male, acutely ill, fighting for breath. Sound of respiration gave evidence of pharyngeal obstruction. Examination of nose was negative; throat showed extensive cellulitis of both tonsil fossae, with marked edema of the pillars, the uvula and, apparently, abscess formation between the pillars on the left. The root of the tongue was edematous and there was much exudate associated with mucus of a sticky, blood-streaked, nature, which was coming from the trachea. The neck showed much induration over the anterior triangles and there were many enlarged glands. The patient complained of much pain on palpation of the neck, but there was no crepitation in the tissues. The heart was essentially negative, except for marked increase in the rate. The lungs contained many scattered rales. The abdomen was soft, no masses, or areas of tenderness; genito-urinary examination was essentially negative. Reflexes were present. Skin was moist, sweating previously.

CLINICAL LABORATORY.—Throat swab made on admission showed staphylococcus albus and many non-hemolytic streptococci. Sputum examination showed many gram positive diplococci, non-encapsulated, many gram positive streptococci, some gram negative diplococcci; many fresh blood cells and numerous puss cells. Urine was essentially negative, except for rare coarsely granular casts. Wassermann was not done, as previous examinations were negative for syphilis.

PROCEDURE.—As this patient gave evidence of marked cellulitis following infection of recent tonsil surgery, with resulting threatened stoppage of air intake, because of edema of the larynx and pharynx and tongue, we admitted him to the Sanitarium so that we might be able to do a tracheotomy if there was any increase in the severity of his symptoms. The local cellulitis was treated by hot irrigations in the throat and the use of steam inhalations to assist in the relief of the laryngeal and tracheal irritations and heat was applied directly over the anterior surface of the neck. He was given 500 c. c. of 10 per cent glucose in the vein daily, as it was almost impossible for him to swallow any amount of liquid nourishment. Forty-eight hours after admission, respiration became so difficult, and the breath sounds so high-pitched, that we ordered him to surgery where, under local anaesthesia, a medium tracheotomy was done. The neck of the patient being so abnormally thick, because of his massive development, and also because of the inflammatory reaction in the tissues, a rather wide incision was made, extending from well above the larynx to two inches below the episternal notch. All structures were carefully identified. The external jugular vein was carefully ligated at the lower border of the thyroid. The thyroid muscles were freed from the gland and drawn laterally and the gland itself was incised across the isthmus, giving a very accurate exposure and, with an absolutely dry field. an incision was made in the trachea just below the border of the isthmus and the largest sized tracheotomy tube was introduced. However, before the tube was placed in the incision in the trachea, silk ligatures were passed through each edge so as to hold the trachea open while the tube was being introduced and these were in turn tied into the cannula to act as an additional fixation of the tube within the tracheal opening. The patient's respiration immediately improved, and he was in extremis at this time, due to the pressure in the region of the trachea. Much bloody mucus was coughed into and out through the tracheotomy tube which showed large quantities of this material were in the larger bronchi. The planes of the neck were then allowed to return to normal position and a few interrupted sutures placed, after hematosis of the thyroid was known to be present, as we did not care to have any secondary hemorrhage enter the wound. Patient was returned to the ward where we continued our post-operative treatment, large quantities of purulent mucus being coughed up and removed through the tracheotomy tube. Tracheotomy tube was kept in place until the 8th day when it was easily removed, the silk sutures having cut through the edge of the trachea incision, as by this time, the throat had returned to a more normal condition, several large sloughs were expectorated by the patient, and the fever had returned to normal and general condition was satisfactory. Patient was put in a chair on the 12th day, the wound in the neck was still discharging purulent material, but the trachea had just about closed over. On the 16th day, patient was talking well and able to take soft diet. On the 19th post-operative day, patient was up and walking around and was discharged on the 21st post-operative day. He has since been seen in the out-patient department. The tracheotomy wound is entirely healed. He is rapidly gaining strength and will soon be able to return to work.

HONOR ROLL

The following have contributed to the Mississippi State Medical Association news section of the Journal this month:

COUNTY EDITORS: DeSoto, L. L. Minor; Franklin, S. R. Towns; Humphrey, J. W. Jacksosn; Leflore, W. B. Dickins; Pike, T. Paul Haney, Jr.; Prentiss, L. L. McDougal; Tallahatchie, J. W. Moody: Warren, H. T. Ims; Washington, J. A. Beals; Winston, M. L. Montgomery.—10.

SOCIETIES: Coahoma County, N. C. Knight; Delta, F. M. Acree; Homochitto Valley, Lucien S. Gaudet; Issaquena-Sharkey-Warren Counties; Newton County, Dudley Stennis; Pike County, T. Paul Haney, Jr.; Tallahatchie County, J. W. Moody; Tri-County, R. B. Zeller; Wilkinson County, Edwin M. Butler; Third Distsrict Health Officers, N. C. Knight. —10.

HOSPITALS: Charleston Hospital, J. W. Moody; Clarksdale Hospital, N. C. Knight; Houston Hospital, V. B. Philpot; Vicksburg Sanitarium.—4.

OTHERS: Felix J. Underwood.—1.

GRAND TOTAL 25.

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HARRISON-STONE-HANCOCK COUNTIES AUXILIARY

January 19, 1937

The annual Doctors' Party was given Friday night in the form of a buffet supper at the home of Dr. and Mrs. Cummings McCall, East Beach, by the Woman's Auxiliary to the Harrison-Stone-Hancock Counties Medical Society. The party, which had been scheduled as a barbecue, was changed to an indoor buffet supper due to the rain. Supper was served from the dining room. The table, covered with a lace cloth, was centered with pink and white camellia japonicas and lighted with small white tapers. Mrs. Daniel J. Williams served the salad; Mrs. Archibald Hewes served the hors d'oeuvres; and Dr. Emma Gay served the baked ham. No set program had been arranged, but after supper some played cards and others found diversion in bingo, Mrs. E. C. Parker winning the bingo prize. The committee in charge of the party arrangements consisted of Mrs. Cummings McCall, chairman; Mrs. M. M. Snelling, Mrs. Archibald Hewes, and Mrs. Emmett Johnson. Those present follow: Dr. and Mrs. George Melvin, Dr. and Mrs. John Laird, Dr. and Mrs. Harry Reynolds, Dr. and Mrs. X. Suraci, Dr. and Mrs. Daniel J. Williams, Dr. and Mrs. W. A. Stevens, Drs. Fred and Emma Gay, Dr. W. W. Cox, Dr. and Mrs. E. B. VanNess, Dr. and Mrs. Archibald Hewes, Dr. and Mrs. E. C. Parker, Dr. and Mrs. Cummings McCall, Dr. and Mrs. Charles McWilliams, Dr. and Mrs. Emmett Johnson, Dr. and Mrs. W. W. Lake, Dr. May Jones, of West Point, Va., and Dr. J. H. Edmonson, of Birmingham.

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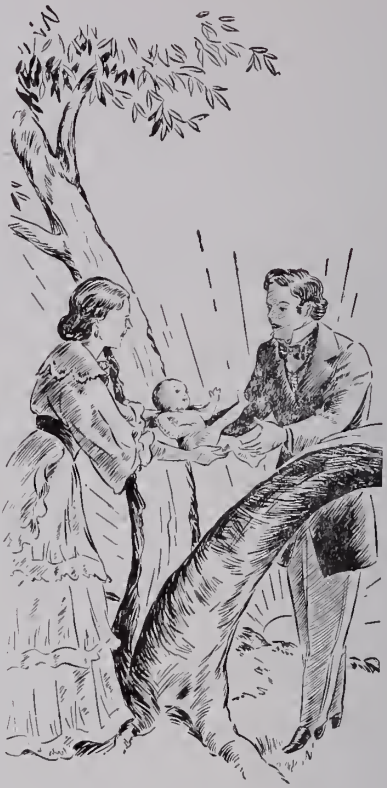
*Frazer, J. G.: The Golden Bough, vol. 1, New York, Macmillan & Co., 1923



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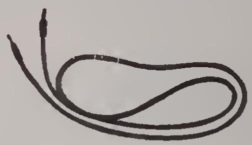

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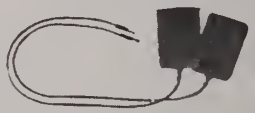

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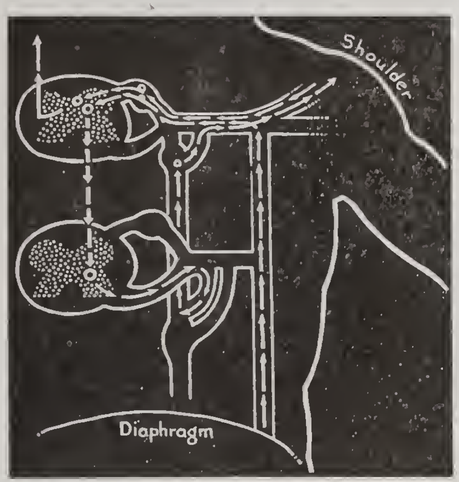

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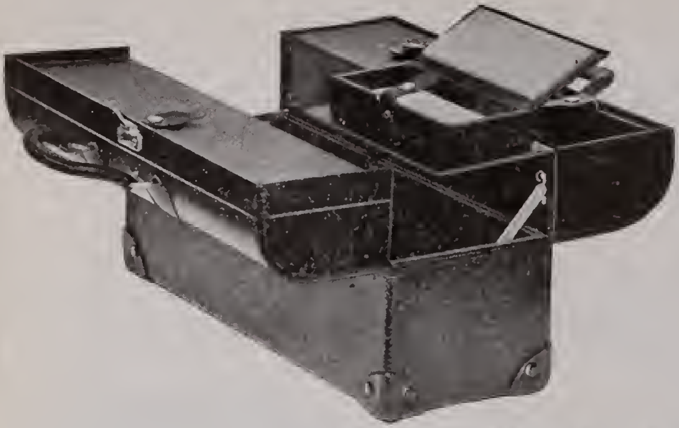

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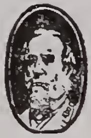

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By ANDREW C. IVY, Ph.D., M.D.‡
CHICAGO, ILLINOIS

My purpose in presenting this subject is to call your attention to the important role that disturbances of the sphincter of Oddi may play in the etiology of cholecystic disease and in producing "biliary tract symtomatology" in the presence of a gall bladder which concentrates normally.

Does a sphincter of Oddi exist anatomically? Although a majority of anatomists who have made dissections and histologic studies of the choledochoduodenal junction report that a sphincter independent of the duodenal musculature exists, there is some disagreement[1]. More recently Schwegler and Boyden[2] have studied the development of this region in the human fetus. They found that an independent sphincter develops at the site of the junction of the common duct with the ampulla of Vater. This sphincter is called the sphincter proprius ductus choledochi.

Does a sphincter exist physiologically? Physiologists agree that in all animals possessing a gall bladder a mechanism exists at the level of the ampulla which at times offers considerable resistance to the flow of bile into the duodenum. All agree that duodenal tone and motility plays an important role in determining the resistance. All conflicting opinion in regard to whether a true physiologic sphincter of Oddi exists is brought on a common ground by the following statement: in all animals having a gall bladder, the common duct possesses a sphincteric mechanism, which is intimately coordinated with duodenal tone and motility, but which may also function independently.

Functions of the sphincter. One function of the sphincter is established, namely it is necessary for the filling of the gall bladder. This function of the sphincter renders it possible for the gall bladder to serve as a reservoir for the storage of bile for digestive purposes and at the same time causes the gall bladder to serve also as a pressure regulatory mechanism. A second function which, I believe, will be argeed upon in the course of time is that the sphincter prevents regurgitation of duodenal contents into the bile ducts and ascending infection. This function is suggested by the fact that when artificial anastomoses are made between the biliary and alimentary tracts, dilation of the biliary ducts and hepatitis occurs sooner or later in most human and canine patients[3].

Physiology and pharmacology of the sphincter. The points of chief interest pertaining to the physiology of the sphincter will be briefly listed:

1. Removal of a normal gall bladder causes the sphincter to become incompetent for varying periods of time. This shows that the gall bladder has a functional relationship to the sphincter.

2. Any procedure which increases the tone of the duodenum retards the flow of bile into the duodenum.

3. Any procedure which decreases the tone of the duodenum and promotes normal peristalsis favors the flow of bile into the duodenum.

4. The vagi are the nerves predominately concerned in increasing the resistance to the flow of bile into the duodenum. The innervation of the sphincter is not simple. For example, spinal anesthesia decreases sphincteric resistance[6].

5. The evidence indicates that when the gall bladder contracts the sphincter relaxes, but not completely. Following the injection of cholecystokinin, which is the hormone that is formed when fats and acids, particularly, come into contact with the upper intestinal mucosa, the sphincter relaxes while the gall bladder contracts.

6. In some human subjects during diges-

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tion, after the gall bladder has started to empty, the resistance of the sphincter will increase and the gall bladder will start to fill. This causes the gall bladder to empty in phases.

7. In the dog the resistance offered by the "sphincter" may amount to as much as 75 cm. of bile pressure. This is greater than the secretory pressure of the liver (30 cm.) and the force of contraction of the gall bladder (20-25 cm.). In man the "sphincteric resistance" may be as high as 60 cm. (5,8). Hence, with a hypertonic sphincter, the gall bladder may contract without evacuating.

8. Atropine decreases the resistance to the flow of bile into the duodenum. Pilocarpine has the opposite effect.

9. Morphine tends to increase the resistance.

10. Nitroglycerine relaxes the sphincter (Hicken and Best). Amylnitrite also relaxes[5].

11. Bile salts (decholin intravenously) tend to decrease the resistance (Neubauer).

12. Magnesium sulphate, sodium sulphate, and magnesium oxide in the duodenum tend to decrease the resistance. There is no real evidence showing that magnesium sulphate in the duodenum causes the gall bladder to contract; the gall bladder empties some, but this is probably due solely to relaxation of the sphincter. Concentrated magnesium sulphate in the duodenum may relax a spastic sphincter. (Meltzer-Lyon, Ivy).

Stasis in gall bladder may be due to a hypertonic sphincter: It is manifest that a hypertonic sphincter may lead to stasis in the gall bladder. (Other causes of stasis in the gall bladder to be considered are: (a) inadequate fat, fruit juices and meat in the diet; (b) stricture of the common duct or ampulla, or other pathology; (c) inflammation of the ampulla; (d) duodenitis and duodenal stasis; (e) disturbances of the cystic duct; (f) and remotely, a disturbance of the alleged sphincter at the neck of the gall bladder.) It has been shown by investigations in my laboratory that stasis in the gall bladder results in hyperplasia and hypertrophy of its mucosa. Stasis presumably predisposes to infection and gall stone formation.

It is possible that prolonged spasm of the sphincter may even cause jaundice.

A *spastic sphincter may cause "biliary tract pain"*: A spasm of the sphincter (sphincterismus) in the presence of a contracting gall bladder produces biliary colic in man. Biliary colic may occur after an injection of cholecystokinin when little or no bile is flowing into the duodenum due to a spastic sphincter (9,10). It may occur following the injection of pilocarpine when the gall bladder is contracting in response to fat. (Pilocarpine causes the sphincter to contract.) In patients with a tube in the cystic or common duct, if the sphincter is spastic, distension of the ducts from 16 to 30 cm. of water pressure will cause typical biliary tract pain[5]. This shows that in the presence of a spastic sphincter pain may be elicited by pressure that may result from a vigorous contraction of the gall bladder. In this connection pain may be experienced in a cholecystectomized patient with obstruction of the ampulla when decholin, a bile salt, is injected intravenously. In other words, the secretory pressure of bile (30 cm. H_2O) when *suddenly exerted* on the bile ducts is also adequate for the production of pain.

Whether the nerve endings of the biliary tract must be previously sensitized by some pre-existing condition to obtain pain is not known. But, it is known that pain can be obtained in presumably normal subjects whose gall bladder visualizes and evacuates according to normal standards.

Biliary dyskinesia or dyssynergia: On the basis of the preceding facts and considerations it is obvious that disturbances of the sphincter of Oddi, or of the choledochoduodenal mechanism, may play an important role in the etiology and symptomatology of biliary tract disease. In fact a number of well known clinicians and surgeons believe that such an entity exists; and this disordered motor state, which also involves the gall bladder either directly or indirectly, has been called biliary dyskinesia or dyssynergia (11,5,6). I, personally, have seen three patients whose symptoms could be explained on no other basis and who responded to medical management consisting of diet, a sedative, small doses of belladonna, and small doses of heavy magnesium oxide after meals. In one such patient (previously normal cholecystogram and normal roentgenologic findings in the alimentary tract) suffering acute right hypochondrial and epigastric distress, mild icterus with an enlarged tender gall bladder (feeling of tumor in the right side reported by the patient), the hypodermic injection of 1/60 gr. of atropine brought relief in five or ten minutes. The patient reported that with the relief he felt the tumor disappear, and several hours later he evacuated a stool of almost pure dilute bile. The same response might possibly have been obtained with nitroglycerine or amyl nitrite.

Westphal's classification of biliary dyskinesia follows:

1. Hyperkinetic.
    a. Hypermotile. Increased motility of the gall bladder with very rapid emptying in response to fat.
    b. Hypertonic. Contraction of the gall bladder against spasm of the sphincter with spastic distension and mild colicky pain.
2. Atonic.
    Relaxation or atony of the gall bladder with spasm of the sphincter causing atonic distension of the gall bladder with mild continuous heavy aching sensation or sensation of tumor.

The following is a theoretical outline pertaining to the motor dysfunctions of the gall bladder and sphincter:

1. A *hypotonic gall bladder* may be:
    A. *Primary* due to a congenital deficiency of musculature or an hypoirritable gall bladder. The gall bladder has never emptied well and much residual bile is present 2 hours after the Boyden meal.
    B. *Secondary* due to:
        a. Increased sympathetic, splanchnic action, or reflex inhibition. (Constipation?) (Pregnancy?)
        b. A hormonal disturbance may be concerned according to some. Cholecystokinin may not be normally formed; or certain hormones produced in excess in pregnancy may be concerned. It is known that evacuation of the gall bladder is retarded in many pregnant women[2].
        c. Relaxation or paresis, secondary to a spastic sphincter which, if it has been present for a long time, may lead to a relaxation or stretching of the gall bladder analogous to that which occurs in the stomach in pyloric stenosis, or in the rectum, or in the urinary bladder as in prostatic hypertrophy.
2. An *atonic or incompetent sphincter.*
    In this instance the gall bladder should not fill and visualize well. By duodenal tube a continuous flow of hepatic bile should be found with little or no increase in pigment after magnesium sulphate, oil, or egg yolks.
    A. Primary—congenital—rare.
    B. Secondary to:
        a. Nervous inhibition of sphincter
        b. Surgical cholecystectomy
        c. Pathological cholecystectomy due to disease
        d. Atonic duodenum (remotely)
3. *Hypertonic dyskinesia*
    Hypertonic sphincter and a hypermotile or normal gall bladder a high sphincter resitance with normal or forceful (hyperkinetic) contractions of the gall bladder in response to fats, acid gastric juice, or fruit juice producting biliary tract distress, reflex pylorospasm, nausea and vomiting.
    A. Primary—constitutional?
    B. Secondary, thought to be due to:
        a. Reflex via the vagi
        b. To hormonal imbalance, some think
        c. Irritable duodenum or irritated duodenum
        d. Inflammation of ampulla
        e. Hypertrophied sphincter

    Findings:
        a. Gall bladder would visualize well
        b. Biliary ducts, particularly the hepatic ducts, would tend to visualize after a Boyden meal
        c. Gall bladder should empty slowly in phases. However, if the gall bladder is very active, it may empty in normal time, or more rapidly, as the stomach may in some cases of duodonal ulcer.
        d. Duodenal drainage before the introduction of magnesium sulphate would be clear or lightly pigmented.
        e. Gall bladder should empty well and distress be relieved, when present, by magnesium sulphate, atropine, nitroglycerine, or amyl nitrite, un-

less edema and inflammation of ampulla are present or there is an organic obstruction.

f. It is possible that the introduction of duodenal tube may provide sufficient irritation to cause spasm in a susceptible sphincter.

An additional roentgenologic observation should be noted. I have obtained, through the courtesy of Drs. Case and Barth of our Department of Radiology, cholecystograms of patients complaining of biliary tract distress in the presence of a gall bladder that visualized exceedingly well. However, after taking the Boyden meal the hepatic ducts were visualized. This certainly indicates abnormality of the sphincter or ampulla, which, I believe, accounts for their symptoms.

Hypertrophy of the sphincter. It is of interest that hypertrophy of the sphincter may occur. This has been observed by a number of observers (12). The cause is not known. It has been found in patients who have had cholecystitis or duodenal ulcer.

Management. The outline given above of the physiology and pharmacology of the sphincter provides the principles for the management of patients with motor disturbances of the biliary tract. However, the matter of diet has not been covered adequately. From the physiologic viewpoint, I believe these patients should receive some but not too much of those foods, such as fats, fruit juices and meat, which excite the gall bladder. The amount of these excitants that the patient should receive will vary from patient to patient. Thus, I believe that the physician should determine what I choose to call the *"biliary fat tolerance"* of the patient. That is to determine how much of the above excitants are necessary to cause symptoms and then place the patient on a diet containing less than that amount. In refractory patients I should recommend the trial of magnesium sulphate by duodenal tube with the hope that more complete relaxation and some detergent action in the region of the ampulla might be obtained. These suggestions should also be applicable to those patients with so-called "chronic cholecystitis" and the post-cholecystectomy syndrome.

Cholecystectomy is reported to be of permanent benefit in from 50 to 75 per cent of cases having biliary dyskinesia. The benefit may be ascribed to paresis of the sphincter that follows the removal of a gall bladder which concentrates. The recurrence of symptoms may be due to the recovery of the sphincter and the return of spasm. The truth of this remains to be proven.

In conclusion, I should like to point out that when one speaks on a restricted subject, such as the one just outlined, the impression of over-emphasis is gained. However, it is clear that dysfunction of the sphincter of Oddi may exist, and hence it must be borne in mind in order to understand completely the etiology, symptomatology, diagnosis and therapy of biliary tract disorders.

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Significant Public Health Trends in Mississippi*

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The Mississippi Board of Health was organized in 1877, sixty years ago, and its members were appointed by the governor upon recommendation of the State Medical Association. The term of office for each member was fixed at six years and the terms of service expired at different times. This procedure in the appointment of members of the Board of Health prevailed until 1892. The law was then changed and under the new arrangement the governor appointed one member from each of the seven congressional districts and five of its members were recommended by the State Medical Association from the state at large. The terms of all members began and ended with each political administration of the state. For thirty-two years the state board of health was thus appointed, and obviously, there was opportunity for a division of administrative direction which might have resulted disastrously to the work of one of the most important divisions of the state government. Fortunately, on account of the interest and loyalty of members of the medical profession and their influence with state officials, this outcome was avoided.

It was a privilege and great satisfaction to serve fourteen years, June 1910 to July 1924, as Director of Public Health and Executive Officer of the Mississippi Department of Health, and during that time one could not have had a more consistent and encouraging support than was given to me not only by the Board of Health but also by the members of the medical profession. This proved to be one of the most stimulating and constructive experiences in my professional career and it is with continued gratitude and appreciation that I venture to mention the fine response which was accorded to me by the medical profession and the public during this most difficult period in the development of the health organization in Mississippi. This was not only a great experience but also afforded an unusual opportunity to make a far-reaching contribution in upbuilding a service which has a tremendous significance to the citizens of this commonwealth.

During my encumbency as executive officer of the state health department in conference with members of the medical profession it became evident that the public health service of the state would assume a more permanent form if all members of the official board were appointed upon recommendation of the state medical association. It was thought that this would serve to unify its efforts and stabilize its outlook; that it would also safeguard the possibility of disorganization of the state health service because of misguided leadership or prejudicial political influence. Furthermore, this would afford opportunity for the medical and dental professions to make a larger contribution in the protection of the public health. It was recognized that the tradition and customs in the development of health departments differ in the respective states; and although there are those who advocate a mixed board, the procedure which is now being followed in Mississippi has strengthened and stabilized the state and local health services. Under the new arrangement as provided in the legislative act of 1924, the board is composed of ten members who are selected as follows: One member is chosen from each of the eight congressional districts from a list of three physicians, representing each district, who are in turn recommended to the governor for appointment by the Mississippi Medical Association; one member of the board is a dentist who is selected from a list of three dentists representing the state at large, who are also recommended to the governor by the State Dental Association; and one member who serves as the secretary and executive officer is elected by the nine members of the board because of his personal and educational qualifications, experience and administrative ability. The present law provides that not only shall the state health officer possess adequate personal and educational qualifications but also, if necessary, a competent person may be selected who is not a resident of the state.

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In reviewing the personnel of the Boards of Health during the past twenty-five years I find that not infrequently members are reappointed and many of them have served ten years or more, which is conducive to greater efficiency and stability to the state health service. It is probable that the present procedure in appointing the Board gives as much security to the full-time health personnel of the state as would be possible under a democratic form of government. The only other method that might be considered as more dedesirable would be a self-perpetuating board which is obviously contrary to well-recognized traditions in the organization of state health work. As has been indicated, the objective is to stabilize the health service and make more secure tenure of office of full-time personnel.

I wish to express continued confidence in the splendid service which the Board of Health of this state is rendering and the fine cooperation which is afforded by the physicians individually and collectively in the advancement of the public health. This is as it should be because the Mississippi Health Department was fostered by the organized medical profession and its advancement has been in considerable measure due to its influence. The cooperation of the profession and public-spirited citizens has resulted in a wise expenditure of funds for health work during the past twenty-five years. For every dollar which has been used for this purpose the dividend in the protection and in the prolongation of human life has much more than compensated for the expenditures which have been incurred. The results which have been achieved in health conservation are of the first magnitude.

The State Board of Health when first appointed, sixty years ago, had very little interest in a broad program and but little knowledge of disease prevention. The Board had meager funds with which to operate and practically no legal authority to enforce its mandates. Available knowledge concerning disease prevention at that time was not greatly advanced. Vaccination against smallpox had been known for a number of years but its general application was difficult to attain. Isolation and quarantine measures were consistently emphasized but often proved of limited value. Cleanliness was regarded as a virtue but this measure was not generally observed, particularly in the preparation and handling of food products and the protection of water supplies. During this early period hundreds of thousands of dollars were appropriated by the state because of the great epidemics of yellow fever, smallpox and cholera. However, these funds were used without adequate knowledge and administrative experience to secure results.

The discoveries of Pasteur, Koch, Lister, Manson, Theobald Smith, Walter Reed and others created interest and increased public confidence in the control of disease and in the promotion of the public health. It was not until Walter Reed made his great contribution to medical science concerning the transmission of yellow fever that its control became practicable. The last outbreak of yellow fever in the United States was in 1905, and this was successfully suppressed because of our knowledge concerning the mode of transmission and the successful demonstration by Gorgas in its control in Havana. However, owing to the traditions and customs which had been established for generations as a result of inadequate knowledge and unscientific procedure in the control of this and other communicable diseases the element of time was necessary in the acceptance and general application by the public of new methods in the prevention of disease and in the promotion of the public health.

The first step toward creating a health conscience among the people was the decision of the Board of Health in November, 1908, to appoint Doctor Fred J. Mayer, of Louisiana, as lecturer on hygiene. The record shows that he made more than two hundred lectures on public health during six months, the majority of which were to school audiences. He states that as imperfect and incomplete as was this educational campaign on public health it proved of value in giving a quickening impulse to sanitary improvements in many towns of the state. Obviously but little contact was achieved in this effort in reaching the great rural population in Mississippi.

In December, 1909, the Rockefeller Sanitary Commission was created and announced it was prepared to spend $1,000,000 in the Southern States for a campaign against hookworm disease. Mississippi received its share of this beneficent donation by Mr. Rockefeller. This work was to be done under the jurisdiction of the state board of health and in cooperation with the practitioners of medicine. Beginning with 1910, not only was there an aggressive sanitation campaign carried on throughout the state, but the board of health also began to build the foundation for public health work in a more secure and permanent way. Those who composed the board at that time and who have served since have had the vision and courage to assume the responsibility in building up a health organization which has through sound educational methods and efficient health operations reached every home in the state. Today the State Health Department of Mississippi in quality of service is second to none in the United States, and its Executive Officer and his able associates are making an enviable record in extending the state public health service in an efficent and commendable way.

The appropriation for public health in Mississippi has steadily increased during the past twenty-five years. In 1910 it was only $7,500, and of this amount $2,500 was designated for use only upon authorization of the governor in case of emergency. The beginning of the hookwork campaign in 1910 caused a rapid expansion of state health work and as soon as 1912 the appropriation was increased to $25,000 per year. In 1914, the United States Public Health Service began in Union County its nation-wide campaign for the investigation and control of typhoid fever. Thus the interest and cooperation of the public was steadily increased and maintained, and, as a consequence, the functional divisions of the state health department were gradually established and the health personnel increased in both state and local health services. Today the general appropriation for public health work in Mississippi is $175,000 a year and, in addition, there is an appropriation of $160,000 for the support of the State Tuberculosis Sanatorium. Therefore, the total annual appropriation for the State Department of Health is $335,000. The state health department receives also from benevolent agencies grants in aid which supplement the sum which is provided through legislative enactment. Thus the funds for public health work have been increased from $5,000 a year in 1910 to $335,000 a year in 1937. The people of the state have very wisely accepted the principle which was enunciated many years ago by Herman Biggs that public health is purchaseable and, within reasonable limitations, it is within the power of a government to determine its own death rate, or the corollary to this concept may be expressed in the proverbial phraseology, "Where there is no vision the people perish."

It is not possible nor desirable to recount in any considerable detail the milestones in the development of the new health program. It is important, however, to note that the bacteriological laboratory which is being conducted so efficiently was established in 1910. The office of the state sanitary inspector was created in 1912 and has since become one of the important activities of the Division of Sanitary Engineering. This division has made a great contribution in the improvement of general sanitation, such as proper sewage disposal, safe water supplies, milk control, shellfish sanitation, school sanitation, sanitary supervision of tourist camps, the preparation of maps, charts and graphs illustrative of the achievements of the state health service, and broadly speaking, it has rendered invaluable service in an advisory and consultation capacity to local health departments. There is no more important division in the state health department.

The Division of Vital Statistics has been developed on an exceedingly efficient basis. The record shows that for a number of years 90 per cent of births and deaths has been reported and within recent years a similar record is being maintained of marriages and divorces. This division is basic in the scientific administration of any public health service.

I wish also to commend the splendid work which is being done by the Division of Industrial Hygiene and Factory Inspection. Mississippi was one of the first four states to create a division of industrial hygiene, and now there are only seventeen. This service had its beginning in 1914 and it has contributed much to the comfort and welfare of industrial groups in the population.

About twenty-five years ago there were

no full-time county health departments in the United States. The first organization of this kind was established about 1911. The inauguration of full-time rural health service marked the beginning of a new era in public health in this country. It put into practice the principle that every one, no matter how remote his residence is from a center of population, may, through group action, secure protection from disease. The practical application of this principle requires rapid motor transportation and good roads, and its development has to a considerable extent run parallel with the improvement in these facilities of travel. The discoveries of practical methods of preventing diphtheria and soil pollution diseases, such as typhoid fever, dysentery and hookworm, and the popularizing of health education have acted as further justification for the establishment of full-time county and district health organizations. There are now 691 counties or comparable rural areas under full-time health service in the United States.

In Mississippi the first full-time health officer was appointed in Prentiss County in 1914, and in 1917 the first full-time health department was established in Harrison County, which has been successfully administered since that time. Today there are twenty-nine counties in Mississippi with full-time health departments. This work has gradually and persistently grown until at present about 38 per cent of the area and 51 per cent of the population of this state are now enjoying the benefits which naturally accrue from a reasonably adequate local full-time health service. It is the aim of the board of health to stimulate further development along this line until all people in the state are provided with a reasonably adequate full-time health service. There is associated with this division the epidemiological investigation of outbreaks of communicable disease. No service which the health department can render is of more far-reaching significance than the extension of an adequate full-time health supervision in those areas which are not now provided with this service.

Among the important procedures now available for the diagnosis, treatment and control of tuberculosis are: the tuberculin test, x-ray examination and collapse therapy. This state in 1916 established a tuberculosis sanatorium which has been developed at a cost of not less than $1,500,000. There has been associated with this institution a field diagnostic or case finding service which has proved of great value in the location of cases for treatment. These two agencies afford a means of applying modern measures for the diagnosis, treatment and control of this disease and as a consequence practitioners have been greatly aided by these services and facilities.

There are many other phases of state health work which are being conducted in a commendable and constructive way, such as the maternal and child health program, the dental hygiene program, the field technical unit, malaria control, milk sanitation and the epidemiological unit. The application of the principles of epidemiology in an investigation and control of outbreaks of the communicable diseases is indispensable. Through the generosity of the Commonwealth Fund a field epidemiological unit has been provided, consisting of a trained epidemiologist, a bacteriologist, a nurse investigator and clerical assistants. Since the creation of this unit in 1933, among other splendid achievements, forty-four typhoid carriers have been found which, unless precautions are taken, will doubtless be the source of much of the typhoid fever in the future. Prior to this study only two typhoid carriers had been detected in this state. This unit should prove invaluable in raising the scientific level of administrative and technical procedures in the study and control of disease.

I wish now to refer briefly to certain accomplishments in the reduction of death rates and the control of specific diseases in Mississippi. The total maternal death rate in 1930 was 9.7, and this has been reduced to 6.6 per 1,000 live births in 1934. During a corresponding period, infant mortality has been decreased from 68 in 1930 to 64 in 1934. It may be of interest to note that in 1930 there were 35 public health nurses and the number was increased to 104 in 1937. The public health nurse is indispensable, particularly in dealing with those hygiene measures which concern the school, the home and the family group. It is probable that the number of nurses which are now engaged has contributed greatly to the reduction of the maternal and infant death rates since 1930. Because of their service there is increased interest and a clear understanding by the general public of what constitutes adequate maternal and infant care. No health service can afford to neglect the group of the population under one year of age; adequate maternal and nursing care of expectant mothers and infants is wise economy in the expenditure of state funds for public health.

The control of communicable diseases has always been traditionally of great importance in public health work. The results attained by the state health department in this field are of tremendous social and economic significance. In 1915 there were 620 deaths from typhoid fever or a rate of 34.8, and in 1934 there were only 66 deaths from typhoid or a rate of 3.1 per 100,000 of the population. This one achievement is adequate compensation for the money which has been expended for public health in this state. During the period from 1910 to 1914 this state showed the highest incidence from hookworm disease in the South. Since that time hookworm has been decreased 62.5 per cent and although it still remains a public health problem of importance the progress which has been made in its control indicates that within a relatively short period hookworm infestation will be reduced to a negligible factor. In 1914 there were 193 deaths caused by diphtheria, or a rate of 10.8; but in 1934 there were only 98 deaths, or a rate of 4.7 per 100,000 of the population. If all children were immunized from six to nine months of age and adequate treatment provided for cases of diphtheria, this disease would be rapidly controlled and become a negligible factor as a cause of illness. Tuberculosis constitutes one of the most menacing health problems in any state but it is encouraging to know that the number of deaths in 1914 were 2,706, or a rate of 150.8; and in 1935 the number of deaths from tuberculosis has been reduced to 1,135 or a total rate of 100,000 of the population. Finally, 1,492 deaths were reported as caused by malaria in 1915, or a rate of 83.2; and in 1935 the number of deaths was 521, or a total rate of 25 per 100,000 of the population. These figures show the trends in the control of many of the communicable diseases and the accomplishments of a health department when conducted upon a sound administrative and scientific basis.

Time will not permit the consideration of special problems in the public health program but I do wish to stress the great importance of the state-wide plan which is being projected for the diagnosis, treatment and more effective control of syphilitic infections. This is recognized as one of the most menacing and wasteful diseases which afflict mankind. Obviously, the procedures which have been used in dealing with this problem have been inaequate in the application of scientific knowledge which is now available for the diagnosis and successful treatment of syphilis. There is need for a more careful analysis in the classification of cases for treatment and the use of epidemiological investigations with the aid of trained social service workers in a case finding program which should be continued over a period of years if significant and tangible results are to be obtained. There is also need for a closer cooperation between practitioners of medicine and state and local health departments in dealing with this problem. I wish therefore to emphasize especially the great significance and tremendous economic importance of the nation-wide program which has been instituted by Surgeon General Parran with funds which are now available through the Social Securty Act of the Federal Government in cooperation with the respective state health services.

In conclusion, I wish to emphasize that the measure of success in any state-wide public health program will not be determined by the amount of money expended, the physical facilities provided, or the regulations or laws that are enacted; but it will rather depend upon the spirit, leadership, team-work and the training and efficiency of the full-time health personnel in cooperation with practitioners of medicine. Of these elements the spirit of those actively engaged in the public health program must be the dominant factor upon which this humanitarian and scientific service will go forward or fail. In the phraseology of the ancient and time-honored injunction, "the letter killeth but the spirit giveth life."

Hematuria

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As hematuria is a symptom and not a disease, I will first give an outline of the pathological conditions in which it occurs, and later will discuss each one in more detail. The more common causes are:

Hemophilia
Erythema
(1) Systemic: Purpura Hemorrhagica
Lukemia
Scurvy

(2) Diseases of adjacent organs such as appendicitis, salpingitis, ovarian cysts, etc., and occasionally by vicarious menstruation.

(3) Lesions of the genito-urinary tract proper include about 80 per cent. Those most often found are:

- (A) Tumors:
  - (1) Kidney tumors: The most common of which are: sarcoma, hypernephroma, carcinoma of the parenchyma, papilloma and carcinoma of the pelvis.
  - (2) Tumors ureter: (a) primary, (b) secondary.
  - (3) Tumors of bladder: Papilloma, carcinoma, etc.
  - (4) Tumors of prostate such as adenoma, adeno-carcinoma and sarcoma.
  - (5) Tumors of urethra.
- (B) Stones in kidney, ureters, bladder, urethra and in men, the prostate.
- (C) Tuberculosis of genito-urinary tract which usually begins in the kidney, but may extend to bladder from a tuberculosis of testicle.
- (D) Polycystic kidney.
- (E) Strictures of ureter or urethra.
- (F) Acute cystitis, ulcer of bladder, etc.
- (G) Trauma: Rupture or contusion, auto accidents, falls, blows, etc. Puncture and gunshot wounds of the kidney or bladder.
- (H) Floating kidney, varicosity of pelvis or kidney and hydronephrosis.
- (I) Essential hematuria.
- (J) Urethral infections gonorrhea or otherwise) Terminal hematuria.

I will now briefly discuss each of these conditions, giving some of the signs and symptoms, and important points in diagnosis:

(1) If the cause of bleeding be systemic in nature, there will be a history of previous severe nose bleeds or of bleeding too freely from cuts or bruises. The clotting time will be too long. A blood count may show the platelets and white cells out of normal proportions. A picture will be negative for stones. A cystoscopic examination will show the bleeding to be bilateral, and a pyelogram will reveal nothing abnormal in the kidney pelves or ureters.

(2) In cases where the bleeding is due to a disease of some associated organ, a history of an acute appendicitis or salpingitis may be ascertained, or an abdominal tumor may be present which may be causing the hemorrhage by pressure. In such cases kidney pathology may be ruled out by a complete cystoscopic examination.

(3) Tumors of the kidneys are very frequent causes of hematuria. The cardinal signs and symptoms of which are: (1) hematuria, (2) pain, (3) presence of tumor in the kidney region.

The bleeding may be intermittent or continuous. Very slight or so severe that the patient's life may be endangered.

The pain accompanying the bleeding may be dull aching in character or very severe, simulating that due to the passing of a stone.

Pyelogram

A cystoscopic examination will show from which kidney the blood is coming and a pyelogram will determine the nature of lesion.

Indigo Carmine given intravenously will give the individual function of each kidney.

If possible the cystoscopic examination should be made while the patient is still bleeding.

A filling defect in the pelvis or one or more distorted calices is very suggestive of a kidney tumor. In doubtful cases an intravenous pyelogram may help to clear up the diagnosis.

Tumors of the ureters are likewise diagnosed by a pyeloureterogram.

Bladder tumors can be seen and diagnosed by an inspection of the bladder. A cystogram is also a great aid in conferring the diagnosis.

Flood in the urine is often caused by tumors of the prostate. They are diagnosed by a rectal examination and a cystourethral examination. In some cases a cystogram will be necessary. Hard nodular areas in the prostate are suggestive of a malignancy. A biopsy may have to be resorted to in some cases.

Stones: The hematuria caused by a stone is usually accompanied by pain. But, if the stone be branched or staghorn variety, in the pelvis of the kidney or impacted in the walls of the ureter or bladder, the pain may be entirely absent.

A K. U. B. is often sufficient to make the diagnosis, but if the stone be soft, a pyeloureterogram will often demonstrate a filling defect.

Stones in the bladder, unless in a diverticulum, can readily be seen during the cystoscopic examination.

Hematuria due to tuberculosis is usually accompanied by frequent and painful urination. The tubercle bacillus can often be demonstrated by either a urinalysis or guinea pig inoculation. The patient also is most sensitive to the slightest instrumentation.

The lesion may be seen in the bladder and demonstrated in one or both kidneys by means of a pyelogram. Tuberculosis of the lungs or other genitalia is nearly always present. Tubercular deposits in the kidney may be erroneously diagnosed as stones.

Polycystic kidney may be diagnosed by the finding of an enlarged kidney on one or both sides, and by the dragon-shaped pelvis and calices as shown by a pyelogram.

Strictures of the urethra may be diagnosed by history and examination of urethra by means of bougies, sounds, etc; while strictures of ureters are demonstrated by means of ureteral bougies or ureterogram, etc.

Blood in varying amounts can often be found in the urine of patients who have had severe falls or have received injuries of the back, where no kidney lesion can be demonstrated. Intravenous pyelography is of great benefit in diagnosing rupture of the kidney or bladder following accidents.

Floating kidneys and hydronephrosis are sometimes the cause of renal bleeding. These conditions are diagnosed by the history and cystoscopic examination, including a pyelogram with the head of the table elevated.

Terminal hematuria is most often caused by an acute gonorrheal infection of the posterior urethra.

By the above mentioned methods most causes of hematuria are readily diagnosed. However, there are a few cases in which a most careful examination will fail to reveal the cause of the bleeding. These are known as essential hematuria.

Treatment: Other than emergency measures, no treatment should be given for hematuria until a diagnosis has been made. Its treatment then will consist of the elimination of the cause. Pituitrin is very effective if the hemorrhage is not too severe.

I now wish to give you a short case report:

Mr. A., 52, white, male.

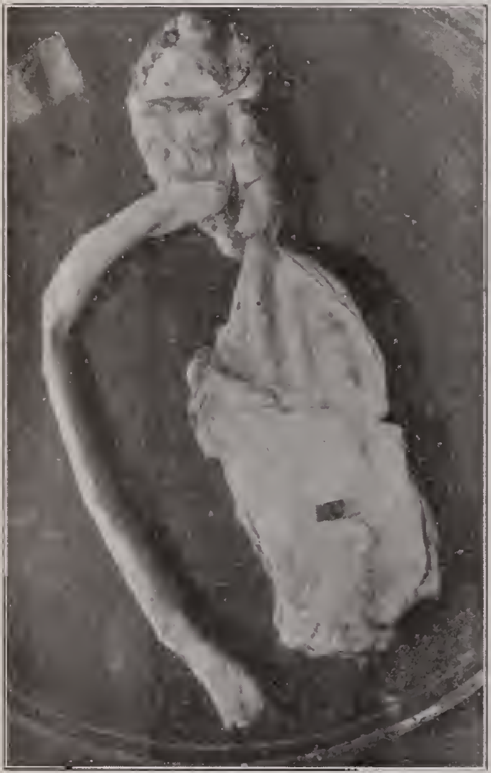
C. C. (1) Hematuria. (2) Dull aching pain in left flank.

F. H. Negative.

P. H. Unimportant until two years ago, when he developed a dull aching pain in his left side and back which was diagnosed as lumbago. However, a few days later he noticed that his urine was filled with blood. During the past two years he has had frequent attacks as described above and has lost some weight.

P. I. Patient is still complaining of a soreness in his left lumbar region. He is passing blood and feels very weak. He has lost 20 pounds of weight during the past three months.

A cystoscopic examination showed the blood to be coming from the left ureteral orifice. An attempt was made to catheterize the left ureter, but an obstruction was met about four inches above the bladder, by which the catheter would not pass. A pyelogram showed a markedly dilated ureter with a filling defect.



Removed Specimen

A diagnosis of a tumor of the ureter was made. At operation this diagnosis was confirmed and the tumor proved to be a papillary carcinoma.

This patient made a very good post operative recovery, but died three months later from a general metastasis.

We feel that had this patient had a cystoscopic examination, when he first began to pass blood, the tumor would have been diagnosed and removed before metastasis had taken place.

CONCLUSION

(1) Hematuria is always a danger signal and should not be passed over lightly.

(2) A most careful search including a cystoscopic examination, K. U. B., pyelogram, etc. should be made at the earliest possible time. As tumors which are often malignant, tuberculosis and stones are the most common cause of hemorrhage.

(3) Tumors of the genito-urinary tract are all malignant or potentially so, and must be diagnosed and treated early if any hope is to be ascertained as to a cure.

(4) As tuberculosis is amenable to treatment only while it is unilateral, time is a big factor.

(5) Stones when left in the genito-urinary tract may cause irreparable damage within a very short time.

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Safe Gynecologic Surgery*

M. Q. EWING, M.D.
AMORY, MISS.

Surgery in any case is simply a mode of treatment, a branch of therapeutics. Sometimes it is the only mode. Sometimes there are other options, that offer more or equal chances of improvement in the patient's condition and finally "surgery" does not necessarily mean "operation."

In any given gynecologic case the object to be achieved is the patient's recovery from the illness, and it is well to pause once in a while and re-consider the objective. The thing we are most interested in and which is our foremost consideration is to save the life of our patient. All other considerations are secondary to this. If the gynecologic disorder does not bring into question the matter of life and death, but rather a question of discomfort, pain, ill health, sterility, and social ills, we must weigh carefully the risks to life in our curative treatment against the already present complaints of our patient. It is far better for the patient to continue her complaints and ill health than to pass to the grave yard as the result of a too hasty or ill advised attempt to relieve her by major surgical procedure.

If I seem to imply that all gynecologic surgery is dangerous and unsafe, that is not my intention. But I do state that practically all gynecologic surgery is dangerous and unsafe unless sufficient care is taken to ascertain the actual ability of the patient to withstand the surgical procedure chosen, and there is no arguing the fact that too much gynecologic surgery is done without adequate checkup of the patient, and that this state of affairs is reflected in increased mortality and morbidity.

There was a time when the surgeon had to rely purely upon his surgical judgment in settling the question of whether to operate now or later or whether to adopt some other method of treatment. The outcome in those days depended much upon the experience and the quality of judgment possessed by the surgeon entirely aside from his skill as an operator. Even thirty years ago, which is a relatively early date as regards modern gynecology, it was recognized that is was unsafe to do laparotomies for acute pelvic infection, but aside from that fact, there were no recognized rules to go by and each man depended upon his own experience, training and judgment. As time has proceeded and statistics from the larger clinics accumulated, and laboratory methods improved, a whole group of methods and rules for determining the potentialities of your patient and the surgical risk involved have been developed. They are very useful and valuable and universal adoption of their use will make for far safer and better surgery.

There is no surgeon present who has not, in the course of taking the histories and examining female patients in his office, remarked to himself the frequency of unsatisfactory results and morbidity in gynecologic surgery. It is true that some gynecologic conditions are emergency and operative interference at once is imperative, but while this is true of some cases it is not true of the great majority. There is rarely any need for haste. The surgeon usually has time thoroughly to check his patient by all the necessary measures and if these disclose that immediate surgery involves considerable risk, it is infrequent that delay and time consumed in improving the patient's condition will militate against the patient's recovery. Many patients die or make a stormy recovery from pelvic surgery, who would have stood the procedure without trouble if operation had been delayed until they were in better condition.

Consideration of safety factors in surgery divides into pre-operative, operative and postoperative measures. We will consider them in turn.

Pre-operative Procedures

1. A careful history and physical examination upon which we will assume that a proper

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*Read before Northeast Mississippi Thirteen-County Medical Society at Tupelo, Dec. 15, 1936.

diagnosis is made.

2. A careful investigation of the heart and circulation satisfying the attendant that the circulatory system will endure the strain of the contemplated surgery.

3. A careful check of the respiratory system. Only emergency surgery should even be contemplated in the presence of even the slightest respiratory infection. If the emergency is so urgent that surgery must be done, then local anaesthesia is usually the anaesthetic of choice, supplemented if needful by light gas anaesthesia. It is worthy of note at this point that surgery under local anaethesia supplemented by gas or under gas alone is being done successfully upon cases of active pulmonary tuberulosis.

4. A careful examination of a catheterized specimen of urine. If the specimen shows abnormalities, then it is necessary to go deeper into the question of the renal condition. If pus or blood is present an attempt should be made to ascertain the source of origin and the cause. A renal function test may be indicated. The presence of albumin, casts or acetone should require appropriate blood-chemistry examinations. Occasionally when we do so examine our gynecologic case we find that the urologic disorder completely outweighs the genital picture and that the thing most indicated is treatment of the urologic condition. In any even, no major surgery should be done until it has been definitely ascertained as far as possible that the kidneys will endure the shock. A post-operative anuria or renal acidosis do not contribute much to the peace of mind of the surgeon or the family.

5. Hemoglobin estimation and a total red cell count are indicated if there is any suggestion of anaemia. If these show a marked anaemia then the surgeon must weigh the factors of safety involved. If the operation cannot be postponed, then it should be limited as far as possible and the patient fortified by one or more blood transfusions. If the operation can be postponed it is always wisest to do so until the patient is in better condition, and the longer one practices surgery the more convinced he will become of this fact. It is astounding to note the number and variety of complications that can and do occur in the case subjected to surgery when the vital resistance is lowered by a chronic anaemia.

6. The majority of gynecologists avoid surgery in the presence of acute pelvic infections. Some few maintain that such surgery is justifiable, an opinion that I in no wise agree with. If one desires to do only safe surgery he will operate only when he is convinced that the acute infection has subsided. We judge that the case is"cool" when the temperature has been normal for ten consecutive days; the blood count normal; the sedimentation rate normal; and when a bi-manual pelvic examination does not provoke a rise in temperature and blood count and a hastening of the sedimentation rate.

   This last test has proved of greater value in my hands than any single test that I know. We are using the Westergren tube method and reading the rate of sedimentation of the red-blood cells in a 200 mm tube, in the course of one hour. We find that with rates from 4 to 20 mm, we need fear no flare-up of infection. Above that point there is a possibility of a flare-up and this chance increases with the sedimentation rate. It is best not to operate on post-abortal or post-partum infections unless the rate is below 20 mm, and in no pelvic infection should a laparotomy be done if the rate is above 40 mm. You will note that these statements concern only pelvic infections, since there are other pelvic conditions which cause an increased sedimentation rate, without contraindication to operation. Another fact worthy of note is that regardless of the pelvic condition that necessitates operation, the operation is safer in the presence of a falling sedimentation rate and vice-versa.

7. In addition to the above measures some of which are applicable only to gynecologic cases, we have series of tests developed which are an aid in determining the capacity of the patient to withstand surgical procedures in general. These are very thoroughly discussed in an article by Albert H. Miller of Providence, R. I., in 1930. (Pre-operative Estimation of Surgical Risk) Dr. Miller is an anesthetist of repute and a study of his article in full will be worth the effort. The most valuable tests are the blood pressure index and the energy index.

The blood pressure index is the fraction obtained by taking the pulse as a numerator and the diastolic as the denominator. Normally this fraction is .50 in health. The upper limit of safety is .75 and the lower limit .25.

The energy index is obtained by multiplying the sum of the systolic and diastolic pressure by the pulse rate. Discarding the last three figures gives the energy index. Normally this is 16, and the limits of safety lie between 12 and 18.

Other tests have been devised by Willard Bartlett which are perhaps useful but really only duplicate the information of these two simple tests which require nothing except a blood pressure reading and a count of the pulse.

8. Choice of operation is important. It is difficult sometimes to avoid doing too much surgery. Often your patient has many things that need doing and wants them all fixed up at the one session. The temptation is great to comply with her desires since we all wish our patients to be completely cured. When this situation occurs it is well to pause and consider more carefully than usual the potentialities of your patient and the surgical risks involved. There are certain pitfalls of false reasoning to avoid in these cases and certain other salient facts to remember.

To enumerate.

a. The false idea that surgical dexterity and speed will allow the operator to do extensive surgery in a poor risk patient is too extensive surgery in a good risk patient. While rapid surgery may help some, it is not able to prevent the shock attendant upon the traumatism occasioned by multiple operations. Surgical shock is dependent upon traumatism. The more trauma and the more blood loss the greater the shock, regardless of how rapidly and how skillfully the operation is performed.

b. The false idea that speed in completing an operation is more important than careful hemostasis as the operation proceeds. It is surprising the amount of blood that can be lost from multiple tiny oozing vessels in pelvic surgery. The fact that this blood is mopped away with gauze sponges during the operation oftentimes causes the surgeon to underestimate the blood loss and resultant shock.

c. The false dea that an obese or plump and rosy woman will stand blood loss well. This is most certainly untrue. Obese individuals frequently endure less hemmorrhage than thin individuals and always much less in proportion to their size.

d. Another salient fact to remember as regards operative surgery is the fact that hemmorrhage to the point of shock does something to the patient's vital forces not completely accounted for by the fluid or loss of blood, per se. That is, we note, restored by restoring the fluid loss or by repeated transfusions of more blood than was lost.

Emergency Cases

9. Even if preoperative precautions have been properly observed we still have the emergency case which demands immediate surgery as a life-saving measure. Such emergencies have to be handled as best we can and it is difficult to draw any rules for their handling. Some of them can delay long enough for a transfusion. Some cannot even endure this delay. In such cases an intravenous clysis of glucose during the operation is very helpful. It goes without discussion that the less operation done in a case of this type is best, our objects being to save a life rather than effect a cure.

Operative

The anaesthetic is properly a portion of any operation. Safe surgery can be done under any of our recognized anaesthetics provided the anaesthetist is skillful and this statement includes chloroform, which has been discarded by most surgeons. Each surgeon has his preference and this to a large degree will depend upon his anaesthetist. In my opinion as a general rule each surgeon does the best work under the anaesthetic of his choice. Except to prefer local infiltration if possible in poor risk cases I do not feel that a discussion of anaesthesia is proper to this paper.

Operative Procedure

To discuss surgical technique in general in pelvic surgery is too broad a subject. I wish briefly to mention a few points of technique that I have found valuable.

1. Time spent in peritoneal toilet is well spent. Cover all raw surfaces and use small plain catgut. To leave raw surface or chromic

catgut ties exposed invites post-operative obstruction. Small plain catgut is as strong as needed since the peritoneum seals |in twenty-four hours.

2. In performing a Baldy-Webster type of suspensions do not neglect the utero sacral-ligaments. If they were relaxed and left so, the operation may not accomplish its aim.

3. In performing ventral suspensions of the Olshausen type be sure to leave no opening for internal hernias between the round ligaments and the bladder.

4. If having difficulty in delivering a large ovarian cyst, do not waste time trying to deliver it intact. Empty it and delivery is easy and safe through a much smaller incision.

5. When confronted with a difficult panhysterectomy and you are uncertain of the position of the uterine arteries in relation to the ureters, do not take a chance "and clamp where they ought to be." They may be displaced and an ureter may be clamped. Expose the ureter through the anterior surface of the broad ligament before clamping the uterine artery. You will sleep better.

6. In vaginal hysterectomy for prolapsus be careful to close the sac in the pouch of Douglas. A hernia can occur through this area.

Post-Operative Procedure

Someone of note in surgery once said that the post-operative treatment was equal in importance to the operation itself, and I certainly agree with this statement. I believe the modern tendency is to over-treat the patient and that more harm is done by over-treatment than by neglect. The poor risk or exsanguinated patient needs things done for her which are possibly harmful and certainly unnecessary in the average case. This paper will concern itself with certain things which should not be done as well as things to do.

Hyperventilation of the lungs by carbon dioxide-oxygen inhalations should be used in patients having an inhalation anaesthetic, before the patient leaves the operation table. This is continued after re-acting from the anaesthetic by persuading the patient to take a number of deep breaths every four to six hours during the first few days. These measures are of value in preventing pulmonary complications.

The patient is frequently drenched in perspiration and should be given a dry gown and dry blankets before moving from the operating room. If the patient should be in grave shock, Trendelenburg position, blood transfusion or intravenous glucose should be used before the patient is moved back to bed. In the average small hospital a blood transfusion cannot be done instantly since blood matching and location of a donor may prove time-consuming. In the meantime 100 to 200 c.c. of 50 per cent glucose given intravenously serves as a valuable substitute.

Until reacted fully, a nurse should be in constant attendance and see to it that the patient is kept warm and dry and that no hot water bottle burns occur. During this period, if the surgeon has reason to expect nausea or vomiting an intravenous infusion or a hypodermoclysis may be given. After reacting from the anaesthetic, the chief things the average case needs are rest, water and quiet and our course is aimed toward that end.

If nausea is present do not give anything by mouth until it ceases. If peritonitis is present do not give anything by mouth until it has subsided. Fluid is furnished by intravenous infusions or hypodermoclysis of glucose or salt solution until this complication is past. Peritonitis has no definite time to subside. Fluid and food may have to be given by this method for ten days or longer.

Pain is controlled by hypodermics of morphine every few hours if necessary. If the patient is nauseated by morphine then pantopon or dilaudid or occasionally codein may be used. Ochsner has proved that morphine does not paralyze intestinal peristalsis but improves tone. Keep your patient comfortable with morphine.

When nausea has ceased give tap water by mouth, in small amounts. If this is tolerated, increase it but do not force fluids by mouth under any circumstances. If the patient is not getting enough fluid or there is need for an excess amount supply it by intravenous or hypodermic infusion. Forcing fluids by mouth in a recently operated case may result in paralytic ileus. Nothing except water is given by mouth until the bowels evidence their return of tone by expulsion of flatus. The use of a colon tube at intervals is valuable at this stage.

If on this treatment the patient still vomits, then a grave complication usually ileus or spreading peritonitis or renal acidosis is present. If much vomiting occurs then it becomes necessary to supply much salt solution to restore the lost chlorides. Blood chemistry tests and examination of a catheter specimen of urine for acetone and di-acetic acid are indicated in such a case. Renal acidosis and a-dynamic ileus resemble each other closely in the early stages.

The bladder should be watched carefully, and not allowed to become distended. Catheterize as often as necessary to prevent distention. In post-operative care of vesico-vaginal fistula repair or repair of extensive cystocele it is wiser to leave a retention catheter in the bladder for several days. Urotropin with sodium acid phosphate, given as soon as fluids are given by mouth hastens return of bladder control and diminishes likelihood of bladder infection from frequent catheterization.

There is no routine time for the bowels to be evacuated. Some surgeons routinely give enemas followed by a cathartic on the third post-operative day. The patient thinks that if her bowels do not act within three days, she will surely die. The surgeon seems to have caught this notion from her. Leave the patient's bowels entirely alone, except for use of colon tube at intervals, until expulsion of gas or audible peristalsis evidence the return of bowel tone. Enemas given before this time cause much more trouble than they relieve. The routine giving of a post-operative cathartic cannot be condemned strongly enough. An ounce of mineral oil on the second or third day usually shows up with a low of s. s. enema given on the fourth or fifth day as indicated by passage of flatus and return of peristalsis. When the mineral oil shows in the bowel evacuation we know the tract is open and can start feeding our patient.

While rest is essential to recovery, rest does not mean lying like a log. Passive motion of the legs and thighs should be begun before the patient reacts from anaesthesia and should be continued for the first day at intervals. Thereafter active or passive motion of the extremities should be routine. Dr. Hugh Gamble has devised an ingenious apparatus for active exercises of the lower limbs. Observance of these precautions will diminish the occurrence of post-operative thrombosis and phlebitis.

In addition to routine deep breathing at intervals daily, it is our custom so use countirirritation in the form of the ultra-red lamp to the front and back of the thorax and abdomen every four to six hours for the first few days. The deep breathing exercises are taken at the same time. We believe pulmonary complications have been materially reduced by these measures.

When the patient's bowel tract is open we begin feeding her. Our usual custom is to give surgical liquids for the first two meals, full liquid diet for the third meal and soft diet for fourth meal. We find that semi solid and solid foods are handled better and with less disturbance from gas, distention and constipation than liquids, as soon as the bowel function is resumed. The first three meals are a test and if they are handled by the patient's digestive tract full diet is rapidly reached.

Last, but not least, do not allow the patient to go home too soon. Many patients will plead with you to allow them to go home before it is safe, even pleading inability to pay the hospital bill as reason. This is difficult to handle but many late complications result from too early discharge from your care.

There is a broad field for discussion of treatment of the post-operative complications [illegible]s, hemorrhage, pneumonia, embolism, etc, but since I have nothing to add to their treatment, they are omitted in this paper.

CONCLUSION

Safe gynecologic surgery means conservative surgery, and remembering that the life of your patient is more important than her health. Time consumed by adopting a conservative course is time well spent.

Yellow Fever In Mississippi 1878-1905

HARRIS ALLEN GANT, M.D.
Columbia, Tenn.

CHAPTER IX

1899

The marked improvement in the handling of freight and travel and regulation of quarantine, as recorded in Chapter VIII, was the work mainly of H. R. Carter. He was a great administrator, and it was very fortunate that such a man was placed in charge of affairs by the M. H. S. in 1897, for at that time as stated in this true narrative, there was great complaint being made against the management of quarantine at Ship Island. Some of our health officers, Dr. Haralson among the number, believed that the fever at Ocean Springs and other towns on the coast that year, had been permitted to come in through the Gulf Quarantine Station, at Ship Island. I never concurred fully in that opinion, believing that it was introduced as usual through New Orleans. However, where there was so much complaint, it is probable there was cause of it, on account of the lax and ineffective enforcement of regulations at that time. The M. H. S., according to Surgeon R. D. Murray, had its quarantine stations from the Delaware Breakwater on the east, to Port Townsend on the west. There were also consular officers in every large seaport of the world, with few exceptions, but especially in South and Central America, Mexico, and Cuba, whose duty it was to make regular reports, and to announce the presence of yellow fever, cholera, or any other infectious or contagious disease in that city. Notwithstanding all these facilities, yellow fever was permitted to gain access into the ports of the United States, and thence to the interior of different states. Naturally the M. H. S. and its officials were charged with incapacity or negligence. Indicative of this state of feeling, and to show how effectively and tactfully Dr. Carter refuted one of these charges, I am enclosing herewith a copy of a reply to Dr. Anderson's "Earnest Protest" written from Mobile, Alabama, January 10th, 1898. I doubt whether this letter, the original of which in printed form I still have, can be found elsewhere among the Carterana. It is quite characteristic of Dr. Carter and his style of writing.

A reply to Dr. Anderson's "earnest protest", by Surgeon H. R. Carter, M. H. S.:

Mobile, Alabama
January 10th, 1898

Dr. Warren E. Anderson,
Pensacola, Fla.
Dear Sir:

I have just seen your letter, without date, to Hon. Frank S. Bardner, and am willing to believe that you will be glad to have any errors of fact therein pointed out.

1. Your first charge against the United States Marine Hospital Service is true—only young men from twenty-one to thirty (not twenty-eight) are examined for admission to the service, and on admission, a very small proportion (if any) have had useful experience with epidemic diseases. That such a man, however, has ever been "sent to preside over the health destiny of New Orleans" or any other place, or is ever likely to be so sent, is untrue. These men, in process of time, grow older and acquire experience under older and experienced men, and not until they have that experience has any one ever been placed "in charge" of epidemic work. This I know. Besides, it is a matter of record which you can easily prove.

I judge too, from this paragraph, that you think that the Marine Hospital Service is limited to its own regular officers, or at least does not avail itself of the talent and experience of other physicians in epidemic and other work. The contrary is the case, and I do not think that the employment of Porter, of Key West, in Jacksonville, 1888 (Dr. Porter received no compensation for his services in Jacksonville, serving at the solicitation, urgent and repeated, of Surgeon Gen. Hamilton, U. S. M. H. S.); Of Wall, of Tampa; Faget of New Orleans; Desaussure of Charleston; Booth of Shreveport; besides a number of other physicians from other cities, and from Brunswick during the Brunswick fever, quite justifies the statement that the representatives of the service "know nothing of the prevailing diseases" of the South. Whether this was true of the regular officers in responsible positions during the same epidemic——

Murray, Hutton, John Guiteras, Geddings and myself——I leave to yourself. If ignorant, it as not from lack of experience.

So far as the commercial interests of Brunswick were concerned, the Brunswick shippers expressed themselves as well satisfied with the way they were concerned, as did the inland transportation companies. The Brunswick epidemic was almost "in toto" under the charge of this service.

The transportation companies and merchants of New Orleans express themselves the same way this year that much of the quarantine was under the United States control of influence. Indeed, nearly all, or all, the relief the commerce of that place obtained, was directly or indirectly through the Marine Hospital Service. Of Mobile I have no personal knowledge.

2. Your second objection is also true. The candidates of the Union. This defect in a United States regular service is, I fear, irremediable. A Florida man has no better chance of entering than a New Yorker; a Massachusetts man than an Alabamian. The same defect, you will note, exists in the organization of the United States army and navy, which, as well as the United States treasury, is charged with the protection of Southern as well as Northern ports.

In your distribution of officers by geographical sections you are in error, and I am at a loss to know where you got your data. I do not consider the state in which an American is born of special importance as qualifying him for United States Sanitary Service, but since you raise the point allow me to give the correct ratios, counting in the service—surgeon general and all.

Twenty-seven per cent were born and raised south of latitude 37 degrees, not less than 5 per cent, as you assert; 53 per cent are of Southern birth and raising. I have not included R. D. Murray in the above, nor men like Magruder or myself in the first, and yet the affiliations of almost a life-time would class us (and others) as "far Southerners." The South, then, is fairly represented in this corps, and, indeed since 1879 it has furnished 66 per cent of the men now in, 34 per cent of whom are from south of your "latitude, 37 degrees." Eighteen per cent of the whole corps have had very considerable experience with yellow fever quarantine at Southern stations. I say "very considerable" advisedly, these men having had service at the larger refuge stations where most of the yellow fever and vessels "certainly infected" with it are treated. For instance, the last year I held Chandeleur there were four (4) arriving with fever aboard; 8 others "certainly infected," i.e. which had had fever in port of departure or en route.

At Tortugas vessels arrived with fever (11 cases). I do not remember the number which had occurred enroute, not many however. Neither of these stations was as large as the South Atlantic refuge station. The records of the Louisiana Board for fifteen years show an average of less than 4 (3 1-3 is exact) vessels per annum "certainly infected," i. e. having had fever in port of departure, enroute or on arrival, between May 1st and November 1st (the "quarantine season" for which the refuge stations are also calculated). This is the largest station South, and with this comparison I think I may claim that an officer serving term at one of the larger United States refuge stations South has a "very considerable" opportunity, at least to learn yellow fever quarantine. Nine per cent have had experience in yellow fever quarantine at stations like Cape Charles, Va., where much less work of this kind is done, and yet this station has treated more infected vessels than any under the Florida Board save one. I have not included service at United States quarantine north of Norfolk, although yellow fever is occasionally treated in them in these statistics. In addition, a few other officers (and practically all of the foregoing) have been on epidemic (yellow fever) duty. I count up of these 12 per cent. If small pox or cholera work be considered, and for a national service these diseases must be considered, almost the whole corps has been engaged, but you evidently consider only yellow fever—my ratios apply to that disease only.

It would seem, then, that 39 per cent have had experience with yellow fever in the South, and not "less than 10 per cent" as you state. You state that "less than 3 per cent are regarded by sanitarians or the general public as possessing any knowledge of the disease (yellow fever) whatever" This is your opinion, and while I believe it (your opinion) to be erroneous, yet as you give no data I do not know how to controvert it. Your State Health Officer, Dr. Porter, would, I am sure, increase the figure in your estimate.

Have you noted that in nearly every bill introduced of late years for a national health service, the promoters have included the Marine Hospital Service in the proposed health service? This is "because," as stated in the presentation of your Girdner bill in 1894, "we wish to avail ourselves of the services of a corps already organized and experienced in quarantine methods and the sanitary control of exotic diseases; to use an efficient tool prepared to our hand." (I do not pretend this is verbatim, but is the substance, and not far from the verbiage). Were there no sanitarians behind that bill? It will be noted that the Marine Hospital Service is included in a bill you favor presented to (but not endorsed by) the American Medical Association.

3. Your third charge is, with qualification, correct. All United States officials are responsible to heads of divisions, bureaus or departments in Washington. I confess, however, I do not see how it can be avoided in any United States service, or what harm it does. A state is not related to the United States as one foreign country to another, but as one of its component parts, and the state representatives are the United States government, and to them are responsible the heads of all bureaus in Washington, and every United States officer anywhere else. I cannot admit this is "Caesarism."

4. This objection, "the inefficiency of the Marine Hospital Service," is certainly a valid opinion, in this paper at least, on an implied statement that the late epidemic of yellow fever was introduced through Ship Island quarantine (a United States station), and that the Brunswick epidemic of 1893 through a station operated by the United States. For neither opinion do you advance any facts, simply assume both propositions. For the first, I have no personal knowledge that the fever did not come in via Ship Island; that would imply that I know where it did come in, and I do not. I do know however, that no evidence has been adduced, or at least has been brought to my knowledge that it did so. From what I heard in Biloxi, Ocean Springs, Scranton, and Pascagoula, I believe the communication of Ship Island and the shore was carefully guarded. I have no personal knowledge of this matter, but that was the opinion of all those health officers, municipal officers, harbor masters and pilot commanders, most likely to know, whom I saw in these communities.

This matter is under investigation by the Mississippi Board of Health, and I hope they will be able to give us such data as to determine the origin of the 1897 fevers. Until we do know something, however, assumptions thatit entered via Ship Island, or Mobile, or Pensacola are gratuitous, and I submit not a proper basis of argument.

"About the Brunswick fever I do know I was early on the ground—June 18," I think stayed untill all was over and made such investigations at the time and afterwards as were possible to me.

First reported case of yellow fever in Brunswick confirmed by autopsy. The master of the Anita Burwind arrived at the city June 10 to 12 (I do not remember the exact date) from the quarantine station sick with wellow fever, and stayed two days at the Ocean Hotel, as shown by the hotel register, died on the 5th or 6th from inception of the fever, Conquest's Camp; diagnosis confirmed by autopsy by Dunwody, the Brunswick quarantine officer. Attempt was made to corral all who worked on the vessel at her loading berth, Brunswick negroes. All save one, who escaped, were reported quarantined (Dunwody). Effort to find those who had been aboard while lying off Brunswick was futile. That any had done so was denied, and indeed she left this mooring too soon for her to develop infection from the captain.

Second reported case: The President of the Board of Health, Dr. Hugh Burford, stsated that in July he saw a patient of the water front (I have forgotten the name), whose case puzzled him greatly. He, at the time of reporting, recognized it as yellow fever, but did not when he saw it.

You may be inclined no tto give due weight to this opinion formed ater the case had pass- from under observation and in general you would be right and it is only because I know Dr. Burford, his caution, his carefulness, his good judgment, that I credit it fully, which I do.

Third case: The keeper of the Brunswick quarantine station states, the mate of the Sp. bark Felo from Havana in dirt ballast was sick at quarantine. The description was like yellow fever and he was nursed ashore. I saw the master of the Felo, and he confirmed the fact of this man's illness, and that he was nursed ashore. (Surgeon Murray has abundant evidence that the mate had yellow fever).

The vessel went to Brunswick July 29, the mate scarcely convalescent, and the cook of the vessel sickened that night at the dock with a fever, for which the master feared to call a physician (statement of the master). This was, I believe, the last vessel passed by the local quarantine authority.

Assistant Surgeon John Branham went to the quarantine station the evening of July 30, and I went down the next morning. On the first day of August he took charge of the station for the United States responsible for the conduct of the Brunswick quarantine station.

Branham slept on the bed at quarantine on which the mate had been sick, and, to my knowledge, was exposed to no probable infection on ships while there. He developed yellow fever at quarantine—more accurately in a yawl about a mile from the station—violent from the outset, on August 9; was visited the next day by the Brunswick quarantine officer and by him taken to the city to the house of his cousin, the city health officer under, of course, mistaken diagnosis.

Branham was exceedingly ill from the first —delirious the first night and unfit mentally to direct the dispostion of himself when he was moved to the city, or he would not have been moved. This moving to the city, although no harm, and indeed good came of it, was wrong, but it was in no sense an act of the M. H. S. It was done by the Brunswick sanitary officials, who had municipal authority, and municipal authority alone, for their action.

The diagnosis of yellow fever was announced on the 12th and precautions taken by local authority against the spread of the disease. It is not necessary to detail these, but they were well planned, elaborate and well carried out. On my arrival—I was with you in Pensacola at this time—on the 14th or 15th I took direct charge of this case, went into quarantine with the sick man and stayed there.

Dr. John Guiteras arrived two days after me, and on beginning inspection of the town, two other cases of yellow fever (Harris and Cox) and in a few days a third (Brobstone) in widely separated quarters of the town, and with no traceable, or even alleged connection with the Branham or each other. The first two had been sick some days when found and there were histories of others, as the Casey family, who carried the fever to Gardi (Dr. Murray).

The town was at this time when Branham was sick, infected in a number of places, with no traceable connection between them. The fever indeed was beginning epidemic when he was brought in.

I give all the above very briefly, but I submit enough to show that Branham did not introduce the infection into Brunswick, and was not the first case, or even the first announced case in that town. His case was analogous to the Gelpi case in New Orleans this year.

I want to say, in all fairness, that I traced no infection in Brunswick to the captain of the Burwind, nor on the other hand, was any ever traceable to Branham.

I would also say that while the service, from its announcing the fever, (the diagnosis was vehemently denied by a majority of the local physicians), and placing a cordon around Brunswick was the subject of all manner of abuse. Yet this charge, that the yellow fever was introduced into Brunswick by the service, so far as I know, never made there, and indeed except once (in 1893) in a conversation with Dr. Hamilton, of this service, and Dr. Rauch, who, an explanation, frankly admitted that it was untrue, I had never known that the charge had been made until I heard of your letter. Surely there were lots of Brunswick people bitter against the service, who would at that time have made the charge had there been any reasonable possibility of it being considered credible.

The quarantine methods in effect at Brunswick up to August 1st, under local authority, were such as almost of necessity to introduce infection if infected vessels came to quarantine. One need not go far to see how it could be introduced. (See my report of 1893 for facts about this station). I bitterly regret his death, but Branham's illness in Brunswick by compelling the announcement of the fever when it did, in all possibility prevented extension of the epidemic to the neighboring towns in communication with Brunswick Waycross, Savannah, Macon, Fernandina, and not unlikely Jacksonville and Augusta.

As explaining the appointment of a non-immune—he was my own selection, and an excellent officer—to the Brunswick quarantine as liable to lead to harm, although it may not have done so, I would say that this station was not to treat vessels from infected ports; these were to be sent to Sapelo for disinfection an inspection station, in fact, of the same class as those of Jacksonville (Mayport) and Charlotte Harbor (Punta Gorda), in your state, at neither of which does your health officer regard it necessary for the quarantine officer to be immune, nor, in my opinion, is there special risk incurred by his not being. I do not find your opinion of the inefficiency of the service work showed by the sanitary or municipal officials in Louisiana, Alabama, Mississippi (except Dr. Haralson) or Georgia. Witness the bill lately passed, nearly unanimously by the legislature of the last.

On two occasions the service has essayed to help your State Board in Florida; in 1893 in investigating suspicious fevers (Murray, magruder and I were on the detail) in Pensacola and Port Tampa; and in 1896 White at Key West. Both times there was little to be done. On the first occasion Dr. Porter expressed himself as pleased with our assistance. and, I think did not regard it "inefficient." Dr. White states that he expressed him[illegible] the same way about that rendered in 18[illegible]. He also expressed himself to me in decidedly complimentary terms on our meas[illegible] to limit the spread of the Brunswick [illegible]er. I count his expressed approval, he not being a friend of the Marine Hospital service [illegible] the more valuable. I think in all honesty that we deserved it.

I have inspected the quarantine stations—all of them—between Baltimore and Apalachicola (except Key West) and am reasonably familiar with those in the Gulf east of Texas; yet were I to say that the work done at the United States stations was all as efficient—not always as quick—as the best I saw, you would probably call me an interested party, and throw out my evidence. Yet I do say it, and it is true.

The remainder of your letter gives simply your opinion on certain matters, not the data on which those opinions are based. That I differ from you is true, but I set out to correct certain errors which I believe to exist in your statement of facts, not your opinions. However, if your opinions be, to any extent, based on these statements, I hope they may be, to some extent, modified by my attempt to give you more correct data.

Very respectfully,
H. R. CARTER,
M.D., Surgeon U. S. M. H. S."

The State Board of Health of Mississippi had more trouble with the health officials of New Orleans than with the Gulf Coast Quarantine Station, for they, on account of interruptions of business, persistently concealed the fact of the presence of yellow fever in the city until it became absolutely necessary to report the same, as will be shown by the resolutions passed by the State Board of Health of Mississippi February 2, 1899, as follows:

Committee on Resolutions reported as follows:

"Whereas, New Orleans is a menace to the health of the people of Mississippi, on account of the lack of management of epidemic contagious diseases by its health authorities, as evidenced by its management of yellow fever during last year, and

"Whereas, the Presidents of the Boards of Health of New Orleans and Louisiana, Drs. Edmond Souchon and Quitman Kohnke, favor concealing yellow fever when it appears in New Orleans, the former contending that yellow fever called by him 'yellowoid' is not a quarantinable disease, and the latter denouncing the law of his state, which requires physicians to report cases of yellow fever, as charged by Dr. McKowen, and without refutation so far as known to this Board, and,

"Whereas, both of these physicians, executive officers of these boards, have refused to inform the country at large when cases of yellow fever and deaths from yellow fever have been reported to them by physicians of their city; (see charges and specifications by Dr. John C. McKowen, Baton Rouge Advocate, (weekly) January 21, 1899), and

"Whereas, in their failure to do this, they have violated an agreement between the health officials of the Southern states, to which agreement they were parties, made at the Atlanta Convention in 1898; and

"Whereas, we believe the refusal of these executive officers of the Boards of Health of Louisiana, and New Orleans, to give this information, was due to the influence brought against such action by the commercial exchanges of New Orleans, therefore be it.

"1. Resolved, That yellow fever is a quarantinable disease, being placed first on the list of quarantinable diseases by all authorities of the past and present.

"2. Resolved, That the name 'yellowoid given the disease by Dr. Souchon, is unscientific, unwarranted and misleading, and is calculated to entice people into an exposure to yellow fever, thereby endangering their lives and the lives of others.

"3. Resolved, That we condemn the practice of concealing yellow fever by health authorities, it matters not how mild the disease may be, because the mildest cases are produced by the same organism that produces the most malignant cases.

"4. Resolved, That a prompt report of all cases of yellow fever, and honesty in the enforcement of health regulations, are the only means by which to prevent the loss of life and the destruction of commerce, since it has been fully established that science is able to check the spread of the disease and permit commerce to be carried on without material obstruction.

"5. Resolved, That yellow fever was introduced into our state last year from New Orleans, Louisiana, because of the failure of the health officials of that city and state to inform our board of the existence of the disease in New Orleans, thus preventing us from taking necessary steps for our protection.

"6. Resolved, That we appreciate the commercial interest of our state and sister states, and that we will do what we can, consistent with good sanitation, to further this interest, but we will never, knowingly, subordinate the health of the people of Mississippi to commerce.

"7. Resolved, since co-operation between Health Authorities of the Southern states is essential to the successful management of yellow fever and in order that commerce may not be unnecessarily obstructed we deem it necessary to insist upon the following requests made in substance by a representative of this Board last September, after he had reasons to believe yellow fever existed in the city of New Orleans, and was not being reported, said requests being then denied the representative of our Board;

1. That a representative of the Mississippi State Board of Health, accompanied by a representative of the Louisiana Board of Health, be permitted to make a house to

house inspection of such localities in the city of New Orleans, and at such times as may be indicated by said representative of the Mississippi Board.

"2. That a representative of the Misssissippi State Board of Health be permitted to see all cases of sickness which may be reported as suspicious by any local physicians in New Orleans.

"3. That a representative of the Mississippi State Board of Health be permitted to visit all the hospitals of the city of New Orleans at such times as said representative may elect. Arrangements for these visits must be made for the season so that the representative will not have to secure special permission at each visit.

"4. Resolved, That it is the sense of this Board that a case of localized yellow fever in a city, said case or cases being in complete isolation, and in charge of the health authorities, would not be sufficient cause for alarm or quarantining the city, but that the health and lives of the people of Mississippi may be protected, they must have, through their constituted health authorities, prompt and full information relative to the health conditions in New Orleans, and with this information the Board will be prepared to act in such way as to protect the State, and at the same time not unnecessarily obstruct commerce."

To which Dr. Souchon replied:

"New Orleans, La., April 21, 1899.

"J. F. Hunter, Secretary State Board of Health

"Jackson, Mississippi

"At meeting of Louisiana Board today, the following requests of the Mississippi Board were acceded to:

Provided the Mississippi Inspector be accompanied by the attending physician or an officer of the institution.

"First, That a representative of the Mississippi State Board of Health, accompanied by a representative of the Louisiana Board of Health, be permitted to make a house to house inspection of such localities in the city of New Orleans, and at such times as may be indicated by said representative of the Mississippi State Board of Health.

"Second, That a representative of the Mississippi State Board of Health be permitted to see all cases of sickness which may be reported as suspicious by any local physician of New Orleans.

"Third, That a representative of the Mississippi State Board of Health be permitted to visit all the hospitals of the city of New Orleans, at such times as said representative may elect. Arrangements for these visits must be made for the season so that the representative will not have to secure special permission for each visit. The Louisiana Board expects same courtesies from Mississippi Board. Board has also endorsed statement of Mississippi Board regarding first cases properly isolated.

Edmond Souchon, M.D.,

President, Louisiana State Board of Health."

THE MISSISSIPPI DOCTOR

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Our state meeting at Meridian will soon be here. A big attendance is in the offing. Write Dr. I. W. Cooper for a room reservation. Do not delay and be inconvenienced for want of a room. Meridian is not going to leave anything undone for the comfort of the doctors. The state association is taking on new life. We are predicting the largest attendance the association has had for years, if not a record breaker. The scientific program is going to be good, unusually good. Other important problems will come up no doubt. Every physician in the state should attend his state association if at all possible. He owes this much to organized medicine. President Harvey Garrison has put heart, soul, and movement into the association this year. President-Elect W. L. Little has given him wonderful cooperation. Their efforts will tell in the meeting at Meridian. Make your arrangements now to meet your fellow doctor there on the 11th of May.

We have already received a number of papers that were to have been read before the Mid-South in February. Others are in preparation. One of these papers each month will be worth more than the price of the journal. Send in your renewals, those who have not. You will not want to miss any number of the journal Many fine papers are in waiting for you this year.

It was a great treat to see Dr. H. A. Gant and his most gracious wife. His special friend Dr. George C. Williamson was a most cordial entertainer. We trust that we may have these three at our meeting in Meridian in May. Mississippi owes Dr. Gant a great debt. We could not do him too much honor, He is a hero in every sense of the word. He did a big part in laying the foundation to the very top of the hill where the real cause of yellow fever was discovered. He was a true and an unselfish investigator. No man ever fought on a battle field with more vapor than did Dr. Gant in this fine work of whipping this awful disease that swooped down on the people each year and caused such consternation.

The Central Medical Society stepped off on the right foot and furnished a program that marks a new day in Mississippi medicine. The Faculty of Vanderbilt University headed by Dean W. S. Leathers gave a series of lectures that constituted a nice post-graduate course during the afternoon and evening of March the second at the Robert E. Lee Hotel at Jackson. We never heard a finer set of lectures. The entire program was very definitely planned. There was no overlapping of subjects. The meeting was well attended, but not as well as it should have been. It was a fine demonstration of just what the busy practitioner may have for the asking. It was evidence that post-graduate instruction is soon to be brought to the profession. We hope to be able to furnish all these instructive and authoritive papers to the readers of *The Mississippi Doctor*. We want to offer our most cordial congratulations to the Central Medical Society, to Drs. Garrison and Long, presidents of the state and the local societies in this forward step in Mississippi medicine.

A faithful sentinel on duty for forty-six years in the medical profession quickly answered the sudden call "off earthly duty" on last Sunday afternoon, March the 7th. Dr. W. V. Davis passed to his reward. He was a native of Prentiss county and a resident of Booneville for many years. He knew the people of Prentiss county as but few men did and they knew and respected him. But few men if any, in North Mississippi, ever enjoyed a larger general practice than did Dr. Davis. It is hard to think of Prentiss county and will be for a long time without including him. He was a man of deep convictions and definite opinions. The practice of medicine was the one thing he did, the field in which he thought, moved and had his being. He loved it. To it he consecrated all of his thought and all of his energy. He was ever ready. The weather made no difference. In the early days he drove a fine team. He loved his horses and cared for them. He kept them fit as he did himself. In the later years he kept his car in order. The tank was filled the last thing at night if it took only a quart. He was diligent and punctual. He was never out of place. A phone call could locate him in one minute any time of the day or night, reach him or find where he was. He left no one thing undone. When the heart attack came he evidently knew that it meant the end, but he did not want to cause any one else one little trouble. He asked a young man to drive him home. He pointed to his house, he would not be carried out of the car, he took the key out as he was leaving the car, he reached the bed and the end came. There was no one little thing left undone. What a lesson. He was active to the last minute. You might think he did not care for pleasure, but he did. He secured this in the line of duty each day, in duty to his profession and to his home. He read from the open book of human life and enjoyed its every page. He saw the wisdom, wit, pathos, humor and philosophy of people in their daily life that entirely escaped the average person. He loved a good joke. He knew more original and appropriate ones than any man we have ever known. His observation was keen and his retentive powers were all but miraculous. It is such a pity that his clinical observations were not recorded in book form. They would have been of inestimable value to the profession. Dr. Davis was highly ethical in practice, always dignified and professional in manner. He was kind and courteous and sympathetic with the suffering and the unfortunate.

Dr. Davis loved his home. He was devoted to it. He honored it, a true husband, a successful and a devoted father as evidenced by the two fine sons who have already made their mark of success in the world. We express our sincere sympathy to Mrs. Davis, to the noble and honored sons and other relatives. We deeply regret the loss to the profession and to the community of the Christian Gentleman, Dr. W. V. Davis.

At the county medical staff meeting at the hospital last Monday night Rep. Sam Nabors, of Corinth, was a distinguished guest. He is very much interested in seeting a hospital established in one of the three counties, Alcorn, Tishomingo, and Prentiss for the treatment of tubercular patients alone. His interest is sincere and we appreciate it. Would that we had more men among the laity who were interested in giving of their time and means to help secure better hospital facilities for the sick. The time has come that general provision must be made for the treatment of patients with tuberculosis. It is rapidly becoming a surgical disease. Mississippi has one of the finest tubercular hospitals in the world. We would not take any glory from it nor from its great superintendent who is second to none the world over. We would just step this hospital up to a great teaching center and clearing house for complicated surgical and medical cases. Every doctor in Prentiss County seems now to have reached the conclusion that the proper set up is for each hospital to have a few rooms set apart for tubercular patients. This is a sound conclusion. It is too expensive to have separate hospitals. The patient with tuberculosis often has other ailments that can better be treated at a general hospital. The surgical treatment of the tubercular must be made general, the simplest of the surgical. If the surgical treatment is good, it should be done early. A department in each hospital would make the doctors tuberculosis conscious, which is important for diagnosis. It is very important that we have this set up in the state at an etarly date. The per capita distribution for the indigent, which can be increased, the town, county, and philanthropic citizens can chip in and the unfortunate can be cared for. Many may be cured. Early surgical treatment with hospitilization will be a great factor in the prevention of this disease. With five to twenty rooms set apart in our fifty or more hospitals, with our Sanatorium as a teaching center and a clearing house for the complicated case, with a modern charity hospital in Jackson as a general clearing house for chronic cases and especially the cripples, and with two-year internship in the Jackson hospitals, including the Sanatorium, Mississippi would probably have the best hospital set up now in the United States and may be the world over. Now since the entire profession of our county is in accord let us push along and take the forward step. Booneville is the capital of Northeast Mississippi. It is an outstanding medical center for a small town. Booneville and Prentiss County have a splendid hospital atmosphere. We are sure our town board and board of supervisors will be with the doctors one hundred per cent. Missionary citizens will contribute if necessary. We venture to say that Booneville will have this department added to its hospital at an early date.—Booneville Independent.

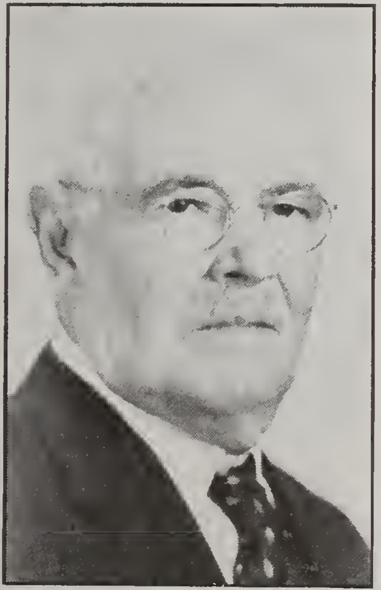
In several consecutive issues of *The Mississippi Doctor* there have appeared serial chapters of a report of yellow fever in Mississippi. This very interesting report is made by Dr. H. A. Gant who for many years was one of the state's most distinguished doctors. Dr. Gant was born in Columbia, Tennessee, but his father moved to Oxford, Mississippi, when the doctor was but a few years old. Hence he grew up and was educated there. After graduating from The University of Pennsylvania Medical School, he located and practised medicine in Water Valley, Mississippi, until 1900. There he was in the thick of the fight against yellow fever when it prevailed in that part of the state. He had the fever himself while fighting it. So his account of these scourges is, prehaps, the most authentic that has ever been published. Soon after these chapters began to appear, Dr. Anderson asked me to join him in a visit to Dr. Gant in his present home in Columbia, Tennessee. He suggested that I invite Dr. W. A. Evans to go with us. This I did and we were delighted to have him accept the invitation to go with us. Wednesday the 10th of this month (February) was decided upon the day for our visit. So at six o'clock that morning I joined Dr. Evans, his brother, Mr. Tindall Evans, and Mr. Evans' wife, and drove to Tuscumbia, Alabama, where Dr. Anderson met us in time for late breakfast. Mr. Evans and his wife, who live in Mexico, wished to view the dams the government has constructed on the river at that point. So Dr. Evans and I transferred to Dr. Anderson's car and we three drove on to Columbia. It was a wonderfully fine day altho quite cold. The drive from Tuscumbia to Columbia carried us through beautiful Maury County and we found Columbia to be a most interesting old town filled with refined and cultured people. I can well understand why Dr. Gant returned to Columbia to spend the evening of life where he and his delightful wife were both born. I found Dr. Gant to be all that the Old South represented. Although he is past his fourscore years, he is scintillating with wit, culture and intelligence. He was expecting us and after a visit in his lovely home, we were taken to the hotel where we were joined by Dr. Williamson who was co-host with Dr. Gant. While I had never met or known Dr. Williamson previously, I was (and so were we all) delighted with his gracious cordiality and consideration. Dr. Williamson is of the present generation, filled with pep and progress but has all the pride and graciousness of the generation that preceded him. After luncheon, he (Dr. Williamson) carried us to his lodge, which is built on and under a ledge of rock on the bank of Duck River just on the outskirts of Columbia. This lodge intrigued me very much, indeed. I will not undertake to describe it, except to say it is unique in design and complete in equipment. I expect to see it again and may have more to say at a later date. When our party left this lodge, we were taken to the Polk Memorial—which is the residence from which President James K. Polk went to the White House in Washington. This home is kept just as it was when he lived in it. It is a sight worth going a long distance to see. But the climax of the trip and visit with me, was reached when Dr. Williamson singled me out for an unexpected experience. He took me to the home of Mrs. E. W. Carmack Sr., who is the widow of one of the South's most gifted sons and, who in my thinking, was the most brillant writer and speaker of his day. His record in the congress of the United States needs no comment. I found Mrs. Carmack to be a most wonderful and lovely woman. Culture, refinement and intelligence were engraved in every feature. Her beautiful eyes spoke the pathos of her widowhood and her tongue, in a restrained way, expressed her devotion to her martyred husband and the cause for which he gave his life a willing sacrifice. In parting she took from the relics that her living-room holds, a framed copy of an extract from one of Mr. Carmack's eloquent speeches on the floor of congress, and gave it to me. This gracious act of hers completely overwhelmed me. I had no words to express my appreciation.

The superscription of this poem—for poem it was—is "Carmack's Pledge To The South." I shall ask Dr. Anderson to carry this poem on the cover page of our journal in an early issue. The 10th of February 1937, will be long remembered by me as one of the fullest days of my experience. In fact I could easily write "a book" about it. Of course the book would find no readers; for the events of the day are of special interest to none but me. Not a single moment of time from 6 a.m. until 8 p.m. was empty or without interest to me. A three hundred mile ride with Dr. Gus Evans, even tho no other thing of interest presented, would suffice to make the day stand out.

I want to thank Dr. Anderson for engineering events that led up to the occasion. I wish that all the readers of *The Mississippi Doctor* might have had the pleasure that was mine.

—G. S. B.

Dr. L. O. Carruth



It is with sincere appreciation of his worth both as a man and as a doctor, and with an earnest effort to acknowledge the great good he has done, that we pay tribute in these words to Dr. L. O. Carruth.

Dr. Carruth, of Chesterville, is Pontotoc County's oldest practicing physician, having begun the practice of medicine in his home community during the spring of 1880, and therefore rounding out his 54th year in the same locality as a "Country Doctor"—one to whom these lines may be aptly applied:

> "He calls no hour of day or night his own,
> Through heat or cold he goes his rounds alone;
> Here, to bring some mortal into being:
> There, to ease some soul that must be fleeing.
> He listens earnestly to tales of grief,
> Forgets himself that he may give relief
> To bodies suffering, or tortured minds,
> In service to all men his pleasure finds
> May God forever bless him with his grace,
> For when he goes, oh, who will take his place?"

Dr. Carruth's parents were Dr. Adrian B. and Amanda Brown Carruth. Their home was at Town Creek, five miles north of Chesterville. His father was a native of South Carolina, but came to Mississippi before the Civil War. At that time mail was carried from Memphis to Columbia by stage coach, and Pontotoc was the distributing point for the daily mail in this section. During the war his father served as Assistant Surgeon of the 31st Mississippi Regiment, and it was during his father's absence in the army that his grandfather made for him his first saddle bags from old boot tops. In them as he rode his stick horse, he carried rusty knives and medicines of his own concoction for the treatment of ailing chickens and cats —"As the twig is bent, the tree is inclined."

As a young man Dr. Carruth read medicine with his father for a year, this preparatory and experience then being required of all prospective medical students. He was graduated from the University of Tennessee Medical College which at that time was located in Nashville. In 1887 he did post graduate work in the Kentucky School of Medicine in Louisville and in 1899 was a graduate student in the New Orleans Polyclinic. Two students of medicine who later became widely known as physicians read medicine under Carruth: the late Dr. John G. Lilly of Tupelo and Dr. Hugh Anderson, now of Sanatorium, Miss.

Among his varied experiences as a practitioner, Dr. Carruth recalls these items of particular interest: He has delivered more than 2700 babies. He has operated, without loss of patient, four times for stones in the bladder and six times for foreign bodies in the windpipe. He did two successful cataract operations. These delicate operations were performed in the homes of the patients, several of them at night with a kerosene lamp to furnish the only lighting facilities. So far as he knows no similar operations have been performed in hospitals of this section, as most doctors carry patients suffering with these ailments to Memphis surgeons. He was regarded as a "fresh air fanatic" in the treatment for tuberculosis in the early days as was one of the earliest advocates of feeding the typhoid patient.

Dr. Carruth was the first doctor in this region to use cocaine as a local anesthetic in extracting teeth. This method was introduced in Louisville in 1887, and he became familiar with it there while a student. When asked how many teeth he had pulled he laughingy said, "A barrel wouldn't hold them."

In the early days of his practice and well into the 1900,s surgery, except in the city hospitals was confined to amputations. There was practically no abdominal surgery. Appendicitis, as such was unknown, but was then diagnosed as "cramp colic" or "bilious colic" and treated accordingly with surprisingly few deaths.

Vaccine for small pox was the only preventive known for contagious diseases. Dr. Carruth recalls distinctly the ravages of infection that resulted from the arm-to-arm vaccination of Confederate soldiers when vaccine became so scarce the latter method was resorted to.

Mosquitoes were not known to be carriers of malaria or yellow fever epidemic of 1878. Aspirin and similar remedies for "aches and pains" were unknown when Dr. Carruth first practiced. Instead, bromide of potash was used and most other medicines prescribed were of the doctor's own compounding as his office was also an apothecary's shop. We have his daughter's own word for it that he mixed and administered the vilest, but most efficacious of cough syrup!

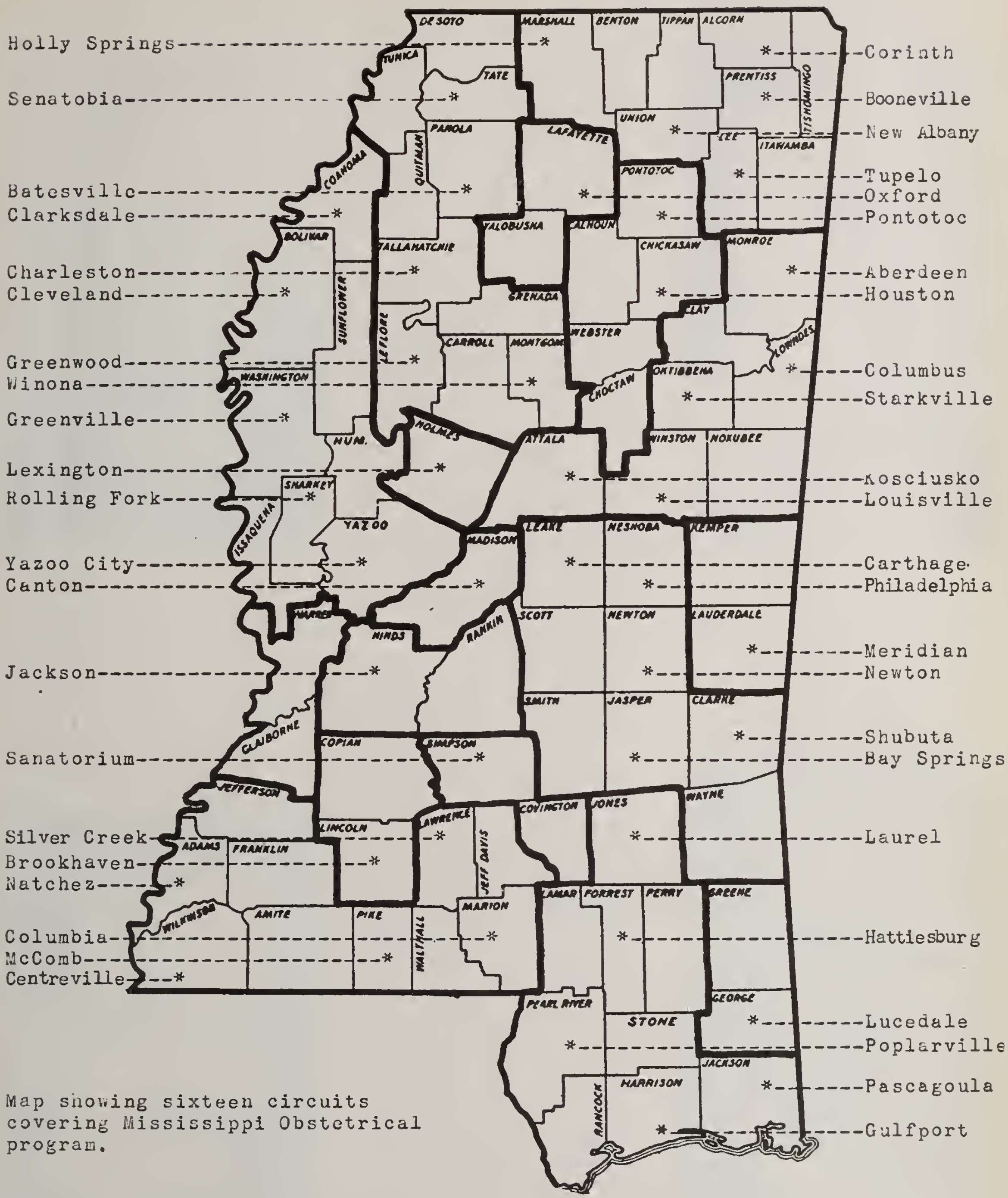
In 1906, following an attack of typhoid fever—the only severe illness of his life—Dr. Carruth subsequently suffered terrific pains in his back. After consulting several doctors he was told he had spondylitis or softening of the vertebra, and that pulling strength of the spine would alleviate the pain. Accordingly he made necessity again the mother of invention when, with two strips of bed-ticking bound securely over his head and under his chin and a small block and tackle he ingenuously officiated at his own hanging! And in this case "hanging separately" proved a cure for his ills, and he was never troubled with a recurrence of this ailment.

Dr. Carruth is a member of the Baptist church. His home and family have been a source of much joy and satisfaction to him. His wife, Sara Allen Brown Carruth, was loved by all who knew her, and her memory reflects a perpetual blessing on the family of eight children who survive: Mrs. George Scott, Dyersburg, Tenn.; Dr. R. W. Carruth, Chesterville, Miss.; Mrs. John Wagner, Memphis, Tenn.; Mrs. A. C. Adams, Belden, Miss; Mrs. T. O. Garmon, Verona, Miss.; Horace S. Carruth, Chesterville, Miss. Five grandchildren have also added a great share to the fulliness of the doctor's cup of happiness.

When asked what philosophy or creed had governed his thinking, the doctor replied,

> "Staying in a good humor—
> Eat and sleep—
> Don't worry."

And we knew as we watched the boyish twinkle in his eyes that he had lived his philosophy—that saying little he had done much, both simply and well. Then we were reminded of an old definition of a successful man, for we believe Dr. Carruth is one of whom it may be said: "He has achieved success who has lived well, laughed often, loved much; who has gained respect of intelligent men and the love of little children; who has filled his niche and accomplished his task; who has never lacked appreciation of earth's beauty or failed to express it; who has always looked for the best in others and given the best he had; whose life is an inspiration and whose memory will be a benediction."


Holly Springs
Senatobia
Batesville
Clarksdale
Charleston
Cleveland
Greenwood
Winona
Greenville
Lexington
Rolling Fork
Yazoo City
Canton
Jackson
Sanatorium
Silver Creek
Brookhaven
Natchez
Columbia
McComb
Centreville
Corinth
Booneville
New Albany
Tupelo
Oxford
Pontotoc
Aberdeen
Houston
Columbus
Starkville
Kosciusko
Louisville
Carthage
Philadelphia
Meridian
Newton
Shubuta
Bay Springs
Laurel
Hattiesburg
Lucedale
Poplarville
Pascagoula
Gulfport
DE SOTO
MARSHALL
BENTON
TIPPAH
ALCORN
TUNICA
TATE
PRENTISS
TISHOMINGO
UNION
PANOLA
LAFAYETTE
LEE
ITAWAMBA
COAHOMA
QUITMAN
PONTOTOC
YALOBUSHA
CALHOUN
CHICKASAW
MONROE
BOLIVAR
TALLAHATCHIE
SUNFLOWER
GRENADA
CLAY
LEFLORE
CARROLL
MONTGOM
WEBSTER
LOWNDES
WASHINGTON
OKTIBBEHA
CHOCTAW
HOLMES
HUM.
ATTALA
WINSTON
NOXUBEE
SHARKEY
ISSAQUENA
YAZOO
MADISON
LEAKE
NESHOBA
KEMPER
WARREN
HINDS
RANKIN
SCOTT
NEWTON
LAUDERDALE
SMITH
JASPER
CLARKE
CLAIBORNE
COPIAH
SIMPSON
JEFFERSON
LINCOLN
LAWRENCE
JEFF DAVIS
COVINGTON
JONES
WAYNE
ADAMS
FRANKLIN
WILKINSON
AMITE
PIKE
WALTHALL
MARION
LAMAR
FORREST
PERRY
GREENE
PEARL RIVER
STONE
GEORGE
JACKSON
HARRISON
HANCOCK

Map showing sixteen circuits covering Mississippi Obstetrical program.

*Denotes the different centers where lectures were held.

The above map reminds us of the fine course of lectures of Dr. Lapham through the cooperation of the Commonwealth Foundation, Our State Board of Health, and Tulane University. This course of lectures we believe will mean much in the years to come. Dr. Lapham brought much accurate information to us. He created interest that will grow and multiply. The bringing of post-graduate work to the busy practitioner is a great step forward, fine for the man already in practice and it will prove its value in time by its reflex action on our medical schools, make them more practical, more adaptable in their teaching.

Dr. L. L. McDougal

Dr. Luther L. McDougal, Sr., President of the Northeast Mississippi Thirteen County Medical Society.

Dr. J. Gould Gardner

Dr. J. Gould Gardner, of Columbia, Councilor 7th District, member of Hospital Commission and past president of Hospital Association, exchange guest essayist.

Read the program for the first quarterly session of the Northeast Mississippi Thirteen Counties Medical Society and be convinced. The Doctors of Booneville and Prentiss County extend to you a most cordial invitation to be present. We are delighted that Doctor Hendon is coming back home. He is distinguished for his treatment of fractures of the femur and ulcers of the stomach and duodenum. Doctor Isidore Cohn is profound in his versatile learning, a great teacher of surgery and its fundamental principles, and withal a facile, practical and successful operator. Dr. Gardner has given much time and rendered much fine service in organized medicine for the last few years. We are proud of our own Doctor Evans who is known around the world for his work in public health, pathology and his "How To Keep Well" column of the Chicago Tribune. Our own Dr. McDougal will preside with ease and effiency.

Dr. G. A. Hendon

Dr. George Allen Hendon, of Louisville, Ky., Professor of Surgery of the University of Louisville. He spent his early days in Booneville.

Dr. Isidore Cohn

Dr. Isidore Cohn, of New Orleans, La., Professor of Surgery Tulane University.

THE FIRST QUARTERLY MEETING OF THE

Northeast Mississippi Thirteen-County Medical Society

WILL MEET IN BOONEVILLE

Tuesday, March 16, 1:30 p. m.

AT FIRST METHODIST CHURCH

Following the scientific program and banquet, which is to be given by the doctors of Prentiss an address will be made by Dr. Geo. Allen Hendon, Professor of Surgery of University of Louisville, Louisville, Ky., subject, "The Public's Relationship with the Medical Profession." Dr. Hendon will be introduced by Dr. W. A. Evans of Aberdeen, Miss.

Dr. L. L. McDougal, Sr., President, will preside over the program.

—PROGRAM—

House called to order by President, Dr. L. L. McDougal, Sr.

Invocation by Rev. P. F. Luter.

Reading and adoption of minutes of last meeting.

"Some Practical Observations of Frequent Conditions of Nose and Throat" by Dr. E. Q. Withers, Columbus. Discussed by Dr. G. G. Armstrong and Dr. L. W. Dodson.

"Acute Hemorrhagic Nephritis in Children" by Dr. L. B. Blackstone, Iuka, Miss. Discussed by Dr. R. B. Cunningham and Dr. M. W. Robinson.

"The Different Diagnosis and Surgical Indications When Splenomegalies Exist" by Dr. Isidore Cohn, Tulane University, New Orleans, La.

"Infection of the Hand" by Dr. J. Gould Gardner, Columbia, Miss.

To Attend Meeting

Dr. Henry Boswell, superintendent of the Sanatorium, one of the world's greatest institutions for treating tuberculosis will attend the Northeast Mississippi Medical Society meeting at Booneville.

Notice

A John Gaston Hospital intern from Mississippi on vacation desires work with a physician from April 10th to May 1st.

Letters to the Editor

Dear Doctor:

Dr. J. W. Thompson died Dec. 25th at Miss.-State Sanatorium. I would like to have you continue sending *The Mississippi Doctor* to me, as I enjoy reading it so much. Am sending $1.00 to pay for a year's subscription, and if there is any back subscription due, please let me know.

This community is badly in need of a doctor but have not been able to find any one who is interested in a country location. This is a large territory and being only thirty-five miles from Memphis makes it a very desirable locality. If you know of any one, or could be of any help in finding some reputable physician who might be interested in coming here, I am sure the people would be very grateful to you. I have a Spencer Microscope, and a Baumanometer Bloodpressure Kompak model, which has not been used more than one half dozen times, that I would sell at a greatly reduced price. Will you please advertise them in the March or April issue of the *Mississippi Doctor* for me, and send me the bill?

Verry truly yours,

Mrs. J. W. Thompson.

Independence, Miss.

Thank you, Mrs. Thompson, for this splendid letter. If anyone knows of a good doctor who is interested in a good general practice please write Mrs. Thompson. We are delighted that Mrs. Thompson is still interested in the chosen profession of her deceased husband.

My dear Anderson:—

I wish to congratulate you on the improved appearance of *The Mississippi Doctor* and I wish to say I count the monthly visits of your journal with a lot of pleasure and digest its contents with satisfaction for the scientific subjects are well selected and interestly presented.

The space you have given in the February issue to the essayists of the Mid-South Medical Assembly programme, the write up on the essayists, is intensely interesting and quite proper, I am enjoying this and anticipating with much interest the prospect of reading many, and I hope all, of these brilliant articles in later issues of your very worthy journal.

So sorry conditions of high water in the Mississippi Valley has prevented the holding of our annual meeting.

I am making my plans to attend the meeting in New Orleans on March 8th and 11th inclusive, I just can't go a whole year longer without attending a meeting on the order of our own Mid-South. I hope to have the pleasure of meeting you there.

I am enclosing one dollar for my yearly subscription and with regards and best wishes. One of the reasons I can't miss a meeting is habit. I haven't missed but one annual meeting of the Tri-State-Mid-South since 1898.

I am,

Yours truly,

Allen E. Cox.
Helena, Ark.

Dear Dr. Anderson:

I received sample copy, February issue, "*The Mississippi Doctor*" and I thank you for sending it to me. I want you to be sure to send me the January issue, also the Journal for the balance of the year. I do not know why I neglected to pay my subscription last year. I certainly do like "*The Mississippi Doctor*". It's a real journal. Enclosed find money order of $1.00.

Best wishes.

Yours truly,

C. C. Ball.
Ravenden, Ark.

My dear Dr. Anderson:

Please allow me to thank you for the copy of *The Mississippi Doctor* which came to me yesterday.

I always enjoy seeing this and may I congratulate you on the nice appearance which this Journal carries with it.

With all good wishes, I remain,

Most cordially your friend,

Gilbert F. Douglas, M.D.
Birmingham, Ala.

Dear Dr. Anderson:

Inclosed find one dollar ($1.00), for which kindly enter my name on your subscription list beginning with the March 1937, issue.

Sincerely yours,

Lyman A. Kasselberg, M.D.
Memphis, Tenn.

Dear Dr. Anderson:

Dr. H. A. Gant, of Columbia, recently handed several copies of *The Mississippi Doctor* to me for my consideration. I liked them so well that I wish to subscribe to the publication for one year. I also would like to have you send me one copy of "The Soul of the Surgeon," by Matas. I want the leather binding.

A check for $1.85 is enclosed.

Very truly yours,

J. T. Hart.
Columbia, Tenn.

Chicago, Illnois.

Mrs. W. H. Anderson,
Booneville, Miss.

Dear Mrs. Anderson:

I have suggested to our Library that *The Mississippi Doctor* be regularly surveyed by that department with a view to including important articles in the Quarterly Cumulative Index Medicus.

Very truly your,

Morris Fishbein.

We thank you graciously, Doctor Fishbein. *The Mississippi Doctor* now goes to every Medical School Library in the United States also.

AT A MEETING OF THE EAST MISSISSIPPI FOUR COUNTY MEDICAL SOCIETY AND THE LAUDERDALE COUNTY MEDICAL SOCIETY HELD JANUARY 21, 1937 THE FOLLOWING RESOLUTIONS IN REGARD TO THE DEATH OF DR. LEONARD HART WERE ADOPTED.

Thus again has death robbed a beautiful and happy home of its sunlight of joy; society of a genial, generous friends and our profession of one of its brightest members, Dr. Leonard Hart.

As a citizen he was loyal to his county as evidenced by his two years service in the Army as Captain in the Medical Corps during the World War. He was faithful to his friends and a sincere friend to mankind as expressed by his charitable views of all with whom he came in contact and his practical charity to the unfortunate. We can pay him no higher tribute, pronounce no grander eulogy than to speak this truth of him. He was a wonderful man, clean and pure in every thought, honest in every impulse, just and upright in every life.

As a physician he was always interested in his patients and regardless of their station in life, gave them all that his great ability permitted him to give. As a consequence his friendships were as varied as were his contacts. He knew and lived the ethics of his profession with his brother practitioners. He supported all organizations created for the benefit of the Profession as shown by his membership and participation in the activities of the American Medical Association, the Southern Medical Association, the Association of the G. M. and N. Railroad, the Mississippi State Medical Association, the East Mississippi Four County Society and the Lauderdale County Medical Association.

In every way he was lovable, loyal and true to the traditions of his medicine and friendship.

"The night dew that falls—though in silence
weeps,
Shall brighten with verdure the grave where
he sleeps.
And the tears that we shed, though in secret
rolls
Long keep his memory green in our souls."

Be it further resolved that a copy of this tribute to our friend, Leonard Hart, be sent to his bereaved widow; that a copy be made a part of the minutes of our two societies and that copies be sent to the *Southern Medical Journal, The Mississippi Doctor, Meridian Star, Jackson Clarion Ledger and The Jackson Daily News.*

I. W. COOPER, Chairman,
W. JEFF ANDERSON,
W. W. REYNOLDS.

Reading makes a ready man. A medical library gives much security to the physician, especially the practitioner or the surgeon who does not always have the opportunity to refer complicated cases or to have the consultation that he might like. *The Cyclopedia of Medicine* is just recently off the press. It is planned to answer every need of the physician or surgeon for ready, condensed and accurate information on any subject that might come up. George Morris Piersol, B.S., M.D., is the Editor-in-Chief of this wonderful work. Edward L. Bortz, A.B., M.D., is assistant editor. Chief Associate Editors are: Doctors W. Wayne Babcock, Surgery; P. Brooke Bland, Obstetrics and Gynecology; Conrad Berens, Ophthalmology; Francis L. Lederer, Otology, Laryngology and Rhinology, and A. Graeme Mitchell, Pediatrics. In addition to the Chief Associate Editors twenty associate editors have cooperated in compiling the data. The Cyclopedia is published in the United States by the F. A. Davis Company of Philadelphia. This group of editors has undertaken to put into concrete and workable form the many advances in medicine and surgery since the World War. All of this authoritative information has been so correlated that this great set of reference books is of value to the practitioner and the specialist alike. Every disease entity has been considered in a systematic manner by men who are outstanding in their respective fields. This Cyclopedia is valuable alike for the teacher, the investigator, the practitioner, the specialist. It marks a new milestone in medicine. It is wonderfully well suited to the men practising in Mississippi.—(Edt.)

Dr. Luther L. McDougal

Dr. Luther L. McDougal, Sr., of Booneville, president of the Northeast Miss. 13-County Medical Society. Dr. McDougal has done general practice in this section for more than thirty years. He has served as president of his county medical society, as councilor for the state medical association for one term, and on the state board of health for eight years. He is very prominent in Masonic circles, being a 32nd degree Mason, a Shriner, and a Knight's Templar. He has served as a state official in the masonic lodge. He was for thirty one months on the Staff at the Miss.-State Hospital with Dr. C. D. Mitchell. Mrs. McDougal has always concentrated her interest in their three fine sons. She is also active in the Woman's Auxiliary of the state medical association. The oldest son, Myers, graduated at Ole Miss., is a Rhodes Scholar graduate, and is now teaching law at Yale. Dr. Luther Jr., is taking his internship at Providence, Rhode Island. He is specializing in pediatrics, is married and has one daughter. Smith, the youngest son, has had one year in medicine at Vanderbilt.

The Committee on Post-graduate Medical Education has a very limited number of mimeographed copies of lectures in obstetrics by Dr. Maxwell E. Lapham. These are available to the medical profession. Physicians wishing copies should write to Q. Edward Gatlin, Post Office Box 770, Jackson, Mississippi, and the complete set (ten lectures) will be mailed without cost.

Malaria Control Program of the Mississippi State Board of Health

By GEORGE E. RILEY, M.D.
JACKSON, MISS.

The program by the state board of health for malaria control was developed after a careful study of the malaria incidence of the state, and with a full appreciation that satisfactory results would require continuously sustained effort and support over a long period of years and that malaria reduction necessarily would be gradual. The "campaign" idea or plan for malaria control has been abandoned.

The program adopted in 1929 is based on sound, generally recognized and accepted scientific knowledge of malaria and its transmission. It is practical, economical, and well received. Briefly outlined, the program is as follows:

(1) To give aid to physicians in making more accurate diagnoses of malaria.

(2) To make epidemiological utilization of laboratory reports.

(3) To promote minor drainage.

(4) To give advisory supervision of anti-mosquito work.

(5) To promote screening of all homes and public buildings.

(6) To promote public education regarding malaria.

(7) To do research work.

This program has been approved by the National Malaria Committee and recommended to health departments.

To aid physicians in making more accurate diagnoses, the Division of Malaria Control has prepared and distributed to physicians in every county of the state more than 50,000 slide-mailing outfits for collecting and sending blood smears to the laboratory. The number of malaria slides examined by the state hygienic laboratory increased from 5,500 in 1931 to 30,000 in 1936. More than 90,000 malaria slides have been examined in the state laboratory in the last five years. This service rendered physicians has enabled them to give more intelligent service to the patient.

Epidemiological utilization of laboratory reports has in many areas located foci of malaria. The definite location of these foci enables health workers to concentrate their control efforts in the area where most needed, thereby doing the greatest good for the least money.

Engineering service is furnished for malaria control to towns, cities, corporations, or individuals. This service consists of surveys, cost estimates, and general supervision regarding malaria control drainage. Where necessary, execution of this work is supervised or directed by the engineer.

Where possible permanent drainage improvement or filling of breeding areas will greatly decrease or wholly eliminate the necessity for the use of larvicides. Drainage by tile or concrete inverts is the cheapest way of affecting mosquito control. Expenditures for this type of work are an investment and affect future economy by eliminating the need for the use of larvicide. The use of larvicide is expensive. It must be repeated weekly from year to year and affords no contribution toward a permanent solution of the mosquito problem. Anopheles mosquitoes are the only vectors of malaria. The inclusion of non-Anopheline or pestiferous mosquito control for malaria reduction is illogical and not a part of this program.

The value of screening as a means of protection from malaria is well established. The state board of health has demonstrated that even the common tenant cabin can be mosquito proofed. In addition to the protection that screens afford from malaria, they also offer protection from fly-borne diseases; such as, summer diarrhea, dysentery, and typhoid. Education is recognized as the greatest factor in the program. The educational program endeavors to teach the public:

(1) That malaria is a disease caused by a definite blood parasite transmitted only by

the bite of a mosquito.

(2) That the mosquito can become infected only by feeding on an infected person.

(3) That malaria can be prevented by the use of screens and the elimination or control of Anopheles breeding.

(4) That every case of malaria should be under the care of a physician for blood diagnosis and treatment; and should remain under his care for sufficient time to obtain a cure.

(5) That, following treatment, every case should be checked by blood smear to determine whether or not all parasites have been destroyed.

Research work has consisted of experimentation with new materials and methods for permanent lining of drainage ditches, and with various kinds and methods of sod. An attempt has been made to keep in close touch with research workers to secure information especially with reference to new discoveries and improvements in the epidemiology, treatment, and control of malaria, and to pass this information on to the medical profession of the state for its consideration.

EDITORIAL—THE TRI-STATE MEDICAL JOURNAL OF SHREVEPORT LA.

Nearly fifty years ago, Dr. Frank Fenwick Young founded the Fenwick Sanitarium, an institution for the scientific treatment of mild mental diseases, drug and liquor addictions.

During all these years, Dr. Frank Fenwick Young's guiding brain and hand have directed its destiny, molded its policies and held it ever upon the highest level of ethical standards. Endowed with all the natural gifts necessary in the real physician, trained in the art of handling those afficted, the Fenwick Sanitarium, under his guidance, has served a wide section of the central South, fulfilling the dream of its founder and winning the respect of the whole medical profession.

Unique in its management and direction, we find the five Young brothers, Doctors Carl, Roland, Frank, Laurie, and Blenk, ably assisting their father in the affairs of the institution, each trained for his respective position. In the practice of medicine, specialists are necessary; likewise institutions for the special care of certain diseases. In the Fenwick Sanitarium there exists this happy combination, a specially equipped hospital owned and manned by a family of specially trained physicians.

During the life of this institution, it has rendered service to patients from all sections of the country, service which has been humane, life preserving and citizenship restoring, serice that has been lasting and durable.

The writer for many years has been happy in an intimate acquaintance with Dr. Frank Fenwick Young and the five Young brothers. He has personal knowledge of the efficient service they and their institution render, and he feels constrained at this time, as they approach their fiftieth anniversary, to congratulate them on their past achievements and to express the sincere wish that the good which they are doing their fellowman, may go on and on.

S. C. B.

DR. H. A. GANT WRITES LETTER TO DR. UNDERWOOD

Columbia, Tennessee
February 11, 1937

Dr. Felix J. Underwood
Jackson, Mississippi
Dear Dr. Underwood:

Yesterday was a red letter day in my "young life." About noon Drs. Anderson, Bryan, and Evans drove up to my door and after spending a short while with us I took them to town for dinner and then my friend Dr. Williamson, who was my only other guest, invited us out to his lodge several miles out in the country, where we spent an hour or two, before a splendid log fire in his comfortable home-like sitting-room. Then after three too short hours, each minute filled with pleasure to me, they left for home. It was a glorious happy day, the most pleasurable I have had for many years. I slept soundly last night after a more than usually strenuous day and just after breakfast my wife and I were delighted to have delivered to us your beautiful flowers, for which I wish to express my warmest thanks and appreciation. It was such a fine, delicate courtesy and so thoughtful in you to include my wife with me in this expression of consideration. She is very fond of flowers, and especially of roses. We have enjoyed them every hour of the day.

The only thing lacking in my pleasure yesterday was your absence. We all miss you but I have hope that you will come to see us soon and this is a special invitation in which my wife joins me. Why not leave Jackson very early some Sunday morning, reaching here by late afternoon, thus saving a day from your active work? We shall be most pleased to have you make us a visit—even a short one.

With sentiments of highest regards and appreciation of your many kindnesses and this last most thoughtful courtesy,

I remain faithfully

H. A. Gant.

"Women's Field Army"

Organization of a "women's field army" to launch its first nation-wide educational drive against cancer was announced recently by the American Society for the Control of Cancer.

The campaign which is expected to save upwards of 40,000 lives annually will begin in 25 states where cancer committees of state medical societies have indorsed the work and will direct its operation.

State commanders, each approved by her state medical society, included:

Tennessee: Mrs. Rogers N. Herbert, Nashville.

Louisiana: Dr. Virginia Webb, New Orleans.

MiMssissippi: Dr. Emma Gay, Biloxi.

—The Commercial Appear

The profession and the people at large should cooperate with the leaders in this noble campaign. Let us do our part to help Dr. Gay, our state leader.

BOOK REVIEWS

With the constant changes in point of view, in methods of diagnosis and the conceptions and treatment of diseases, one must look to revised textbooks on surgery, and admit that there are scarsely any diseases in which the surgeon should be consulted. Pulmonary tuberculosis, certain aspects of nephritis, heart diseases, malignant hypertension, cancer of the lung, hyperinsulinism, hyperparathyroidism are among those conditions which demand the attention of the surgeon. Endocrinology, from a therapeutic standpoint, is largely a surgical problem.

Therefore TEXTBOOK OF GENERAL SURGERY, by Cole and Elman, is perhaps the most recent book on surgery containing concise information about many of the advances which have been made in surgery for the general practitioner. Even the experienced surgeon will find the book most helpful.

The authors stress case histories, and microphotographs of various neoplastic and other diseases are included because of the importance of surgical pathology. Chapters in gynecology, genito-urinary surgery, neoplasms and cysts, neurosurgery, plastic and oral surgery are valuably contributed by some of our most recognized authorities on these subjects.

TEXTBOOK OF GENERAL SURGERY is published by D. Appleton-Century, New York, and the price is $10.00.

Seven years ago a very timely book on proctology was published in thorough exploitation of the subject. But since its publication, the authors avers, marked progress has been made in the subject, so much that he has prepared a second edition, PROCTOLOGY, by Dr. Frank C. eomans, of New York City, in which these advances are added.

Notable changes are:

Injection treatment of hemorrhoids—technic of phenol in oil solution; radiodermatis, histopathology of anal crypts, angranulocytic angina—anorectal involvement; lymphopathia venerea in the etiology of rectal stricture; melanosis coli (new); pectenosis pectenotomy; and revised statistics of the results of treatment of rectal carcinoma by irradiation and by excision.

A new method of treating pruritus ani; various types of rectocolonic ulceration and methods of treatment of amebic dysentery are discussed at length; diverticulties, non-malignant tumors form an important section of the book. A new electric snare for use through the proctoscope is presented. Illustrations are clear and concise.

PROCTOLOGY is published by Appleton-Century, New York City. Price, $10.00.

The diagnosis is still the major problem in the practice of medicine. It will continue to be. In making a diagnosis it is necessary to compare the symptoms of one disease with that of another in almost every case, with many in the majority. One of the most helpful books the profession has had since 1912 is: "Index of Differential Diagnosis," Edited by Herbert French, C.V.O, C.B.E., M.D. Oxon., F.R.C.P. Lond., consulting physician to Guy's Hospital. The book has seven hundred and forty two illustrations of which a hundred and ninety six are coloured. The book contains eleven hundred and forty five pages including an Index of Diagnosis of Main Symptoms. It not only deals with the symptoms, but it deals with the methods of distinguishing between the various diseases in which each individual symptom may be observed. In the preface the editor makes the following statement: "The original purpose of the work remains unchanged; it is intended to be a help in arriving at a correct diagnosis in cases in which one or more symptoms are pronounced and yet the real nature of the malady is not immediately clear. It would seem that the book serves a useful purpose for it has already reached its 53rd thousand." The methods of arriving at the diagnosis are logical and conclusive. The subject is covered fully. Not only the signs and symptoms are given in arriving at the diagnosis but an explanation of what caused the sign and the symptom make the entire book very interesting. The plan of the book makes it a teacher. It stimulates thought. It is conducive of logical thinking. It leads to accurate conclusions. It separates the grain from the chaff and shows you why. This book is a daily Bible for both physician and surgeon. It may be had from the William Wood and Company, Baltimore. The price is sixteen dollars.

Applied Dietetics, by Sanford Blum, M.D., published by F. A. Davis Company, Philadelphia. Price, four dollars and seventy-five cents.

This book by Dr. Blum is very practical. The diets are arranged so as to be easily modified to meet the needs of th eindividual patient. He takes into consideration the factors that might influence metabolism as age, temperature, and state of health. He discusses the importance of a diet that the patient can and will follow. This may be governed by occupation and by resources anl other factors. The author discusses food values in a way that you can make out your own diet list intelligently if you so desire. He discusses at length the normal for well persons which is of the greatest importance. Vitamines are discussed at length, their value, distribution, origin, chemical composition and the effect of heat upon them. In making out the diet lists Dr. Blum has striven for simplicity. In a general way the type of meal that might be found helpful and proper in each and every disease is outlined. This is very helpful to the general practitioner. The diet for the adult in Health and Disease is given a full discussion. In addition to a diet list for each disease and a discussion of same, Dr. Blum gives much space to infant feeding. The practitioner will find this book indispensible.

MEDICAL MORALS AND MANNERS is a volume of papers and addresses written and published over a period of years by H. A. Royster, a surgeon of forty years experience in Raleigh, North Carolina. Dr. Royster writes informally for the laity, because, he says, "more and more the public is becoming medical-minded, and the physician will always find a ready response from the laity when he talks and writes frankly and freely of matters affecting their mutual relations. The papers cover a wide range: the relations of doctor and patient; women and the doctor; "physical morality"; golf's reason for being; the ideal nurse. Another group deals with the aspects of surgery: surgical vision, surgery and the general practitioner, and others. And very valuable are the chapters on James Marion Sims; Abram Van Wyck Budd; Edmund Strudwick; recollections and reflections of great interest.

This most readable book is published by The University of North Carolina Press, Chapel Hill, N. C., and may be had for $2.50.

The Cyclopedia of Medicine edited by Dr. Piersol, 13 volumes is a fine reference work very valuable to the general surgeon and the general pratctitoner in Mississipp.

On to Meridian May 10—13 inclusive is to be the order of the day, Get your room reservation now.

Dr. Garrison is going to give the Pediatricians a great treat on Monday, May the 10th at Meridian, the day before the regular meeting. Note the program he has in store for you.

Get your patients to subscribe for Hygeia if you can. It is fine reading matter.

Dont fail to read the paper of Dr. W. S. Leathers on Medical trends in Mississippi. It is fine.

MISSISSIPPI STATE MEDICAL ASSOCIATION
and
COMPONENT SOCIETIES

Ruptured Ectopic Pregnancy*

W. W. HALL, JR., M.D.
Shelby, Miss.

Definition. Ectopic pregnancy, or extra-uterine pregnancy may be defined as any condition in which the fertilized ovum implants itself and begins to develop in any position outside the uterine cavity.

Historical. It was in the eleventh century that the Arabian, Albucasis, first made mention of a case of abdominal pregnancy in which the fetus died and an abscess later formed. This ruptured at the umbilicus and fetal bones extruded. In 1604, the first definite case of pregnancy in which the fetus was found implanted in the fallopian tube was described by Riolamus. From that time to the beginning of the 20th century occasional cases were reported, but it was after 1900 that ectopic pregnancy began to be diagnosed more frequently and not considered a rarity. Lawson Tait, in 1883, was the first surgeon to make a diagnosis of ruptured ectopic pregnancy and operate immediately. Soon afterward he reported a series of forty consecutive cases which were operated upon with only one death, and it was largely as a result of this report that operation soon became the accepted treatment of choice.

Incidence. Through data released by the health department of one of our largest cities it was estimated that the ratio of ectopic pregnancy to normal pregnancy was about 1:325. This ratio is probably less than it should be because of the fact that many cases of tubal abortion or tubal rupture of a pregnancy in the fimbriated end of the tube never come to operation. The pelvic hematocele or blood clot thus formed is gradually absorbed and the patient apparently makes a slow recovery from a condition which is erroneously diagnosed as pelvic inflammatory disease, or cul-de-sac abscess.

Etiology. Any condition which interferes with the progress of the fertilized ovum from the graafian follicle to the uterine cavity may cause ectopic pregnancy. These causative factors may be divided into two groups:

1. Pathological conditions within the lumen of the tube which cause the fertilized ovum to become arrested and embedded there, and
2. Pathological conditions outside the fallopian tubes, which obstruct the passage of the fertilized ovum by kinking or pulling on the tube or by pressure, thus narrowing the lumen.

It is an accepted fact that abnormalities within the tube, chiefly mild inflammatory processes, cause a swelling of the tubal mucosa with a resulting partial obstruction to the lumen of the tube. This obstruction, while not enough to interfere with the upward progress of the spermatazoon, may prevent the downward passage of the fertilized ovum and thus cause the latter to become embedded and attached to the mucosa. It is agreed by most writers that this is the most frequent single cause of tubal pregnancy, the inflammatory process being usually neisserian in origin. Slight inflammation may also lead to the destruction of the cilia whose action is probably necessary for the normal passage of the ovum from the fimbriated to the uterine end of the tube. It has been pointed out that arrest of the fertilized ovum is not caused by active salpingitis at the time but as a result of previous infection with its subsequent folding together of parts of the tubal mucosa so as to form blind pockets. These blind pockets form excellent receptacles for the passive ovum.

Other factors which may cause obstruction from outside the tube by pressure or kinking include pelvic adhesions from previous pelvic peritonitis. This may be the result of a previously ruptured appendix, but more often is from peritubal adhesions of gonorrheal origin. Ovarian tumors and parovarian and broad ligament cysts have also been found to act as obstructing agents.

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*Read at the Sixty-ninth semi-annual session of the Clarksdale and Six Counties Medical Society, Clarksdale, Nov. 4, 1936.

Pathology. When a fertilized ovum is arrested and implanted in the mucosa of the tube, unless there is operative intervention, either a tubal rupture or a tubal abortion results.

By "tubal abortion" is meant the extruding of the products of conception through either the fimbriated or uterine ends of the tube, by far the greater number being through the fimbriated end. This is accompanied by symptoms of about the same nature as tubal rupture, but not nearly so severe. There is more or less pelvic bleeding, and a pelvic hematocele results. The original placental attachment to the tubal wall may be still held partially and gradual bleeding continue, the hematocele assuming immense proportions. According to some writers, this is the more frequent sequence of events.

As soon as the ovum becomes attached to the tubal mucosa, pathological changes begin. There is increased vascularity and edema of the tube. The stroma cells enlarge and become decidual cells. The muscularis hypertrophies around the site of the attachment of the fertilized ovum, and the wall of the tube becomes penetrated by wandering cells termed "trophoblasts." The trophoblastic villi burrow in between the muscle fibers, thus weakening the wall of the tube and paving the way for rupture. At the same time the uterus becomes larger because of increased vascularity and hyperplasia of the endometrium. A decidual transformation takes place which is quite similar to that occurring in a normal intra-uterine pregnancy. The spotting of blood encountered in tubal pregnancy is merely the throwing off of degenerated decidua. Polak and Novak contend that this spotting is due to the death of the ovum but not all contemporary writers are of the same opinion.

Pathologically and clinically the following classes may be present:

1. Simple Tubal Pregnancy (before rupture).
2. Tubal Abortion—in which the ovum is extruded from the fimbriated end and a pelvic hematocele results. A great number of cases of tubal abortion are cases which have previously been diagnosed as tubal rupture.
3. Tubal Rupture with Single Moderate Hemorrhage. These cases are more frequently diagnosed as recurrent salpingitis or tubo-ovarian abscesses because of the frequent at-
4. Tubal Rupture with Profuse Hemmorrhage. Here there is blood lost in large amounts and severe shock is present. The usual location of this type is in the interstitial portion of the tube.
5. Tubal Rupture into the Broad Ligament. This results in a hematoma between the layers of the broad ligament. If the embryo retains its tubal attachment and continues to grow, a broad ligament pregnancy may result.
6. Ovarian Pregnancy. This form is one of the rarest of ectopic pregnancies.
7. Abdominal or Wandering Pregnancy. The placental attachment has been reported to practically every organ in the abdomen, more frequently the sigmoid, small intestines and liver.

Symptomatology. 1. Before Rupture. Usually there are the same symptoms present here as those of a normal pregnancy. The patient misses her regular menstrual period. There is slight morning nausea with a little tenderness of the breasts. There may be some soreness in the pelvis, usually to one side, but not enough to be alarmed over. Pelvic examination at this time may reveal a slightly enlarged tube which is mildly tender. About a week or ten days after the previously expected date of menstruation, vaginal spotting of blood may begin, usually a few drops or so, every one to three or four days. The patient usually believes she is pregnant and accounts for her somewhat abnormal state because she once had a relative or friend who had a great deal of trouble the first month or two of her pregnancy.

2. After Rupture. The onset of a tubal rupture is characterized by a sudden, keen, lancinating lower abdominal pain which is caused by the reaction of the peritoneum to the pouring out of blood into the free peritoneal cavity. If the hemorrhage is moderate or small, the acute pain passes away in several hours, but low abdominal and pelvic tenderness and soreness persist for days or weeks. If no subsequent hemorrhage occurs, the case may be thought to be inflammatory in origin and treated as such. As a rule, however, the hemorrhage is so severe that signs of shock are present. The pulse becomes rapid and thready and blood pressure drops

to a systolic of 70 or 60 mm. Respirations are labored and rapid with the "air-hunger" type making a profound impression on the attending physician. The color becomes pale or even ashen. The body is cold and clammy, the temperature is subnormal and the patient calls out for water to quench her increasing thirst. The abdomen presents board-like rigidity and tenderness, and pelvic examination reveals a soft cervix, enlarged uterus and a mass in one adnexal region. It is quite important to note that the onset is ushered in by some act of straining on the part of the patient, which increases intra-abdominal pressure. Quite frequently this is while having a bowel movement, and fainting frequently follows because of the severity and depth of the resulting shock.

Treatment. A case of ruptured tubal pregnancy is just as much a surgical emergency as a severed jugular vein and should have the advantages of laparotomy as quickly as shock can be overcome or checked. There are some surgeons who contend that bleeding will stop as soon as the blood pressure falls low enough, but this is true in only about half the cases. Death certificates are proportionally too high with the cause of death listed as "ruptured tubal pregnancy with hemorrhage and shock," and many lives can be saved by quick operation.

Over a 35 year period at John Hopkins Hospital the operative mortality in these cases has been less than 4 per cent. Statistics from other large hospitals show about the same risk, too.

In this modern era with modern roads and well equipped hospitals there is no need to delay sending a patient to a hospital as soon as a diagnosis of ruptured tubal pregnancy is made. Treatment should be instituted as soon as possible. In cases of bleeding from smaller vessels, gum acacia intravenously does more to check hemorrhage than any other type of fluids administered, even surpassing blood transfusion. The treatment of shock is the same here as in any other case, namely, Trendelenberg position, fluid by needle, external heat, morphia, stimulants and quiet. The patient should be prepared for surgery while donors are being matched for blood transfusion. Glucose and saline should be administered intravenously before and during operation, and transfusion should be performed as soon as a compatible donor is obtained. Ether is less depressing than most other forms of anesthesia and is, therefore, indicated, particularly since it gives better relaxation and is somewhat of a stimulant. A rapid but thorough laparotomy should be carried out. The abdomen should be entered through a midline incision of sufficient length to give good exposure. Oozing from the incision can be readily controlled by lateral packs or gauze sponges, and the offending tube should be clamped off as quickly as possible so as to prevent further blood loss. Blood clots should be scooped out of the pelvis, but bright red blood may be left in the free peritoneal cavity as it may be re-absorbed.

Some surgeons contend that the unaffected tube should also be removed because of the danger of a possibility of tubal pregnancy on that side at some future time. This contention is not held by all. Numerous cases of normal pregnancy following removal of a tubal pregnancy have been reported, and it is probably best to individualize each case according to the type of pathology present, the age of the patient, the number of children and the operative condition of the patient on the table. One would hesitate to remove the unaffected tube in a young woman pregnant the first time and desiring children when the causative factor of her tubal pregnancy was apparently a parovarian cyst. On the other hand, if definite pelvic adhesions were found to be present in a woman who had one or more living children, and the opposite tube from the one ruptured was found to be definitely diseased, both tubes should be removed. It is a good idea to put 1,000 to 1,500 c.c. of warm saline solution in the abdominal cavity just before the peritoneum is closed so as further to combat shock. Transfusions of 300 to 600 c.c. every one to two days until secondary anemia is negligible do much to make a convalescence shorter and more comfortable.

Case Reports. In reviewing a series of thirty cases of ruptured ectopic pregnancy which were admitted to The Baroness Erlanger Hospital, Chattanooga, Tennessee, over a three year period (1933-1936) the age limits were found to have been from 18 to 37 years, the average being 28.8 years. There were four colored women and 26 white admitted. This small proportion may be accounted for by the fact that the colored to white ratio of patients admitted is about 1:3. Nine of the patients had never been pregnant before, and the remaining 21 had had from one to seven previous pregnancies. Two of the patients were not married. The duration of the marital history in the remaining 28 ranged from 4 months to 16 years, the average being 8.4 years. The time elapsing from the onset of the last normal regular menstrual period to the date of operation was from 27 to 81 days with an average of 49 days (7 weeks). Twenty-seven of the thirty cases gave a history of spotting blood after the last regular normally expected period.

A history of chronic salpingitis was found in 16 of the patients, the remaining 14 showing no signs of pelvic inflammatory disease. The character of the onset in 17 cases was sudden and accompanied by shock. In the other 13 cases there was a history of pelvic pain of more or less severe nature but with no accompanying signs of serious hemorrhage.

Seven patients gave a history of from one to three previous miscarriages. Eleven cases were given blood transfusions. One patient was in the hospital 14 hours and died without operation. Autopsy revealed a ruptured tubal pregnancy with the free peritioneal cavity filled with blood. The patient was an unmarried white girl. One patient died with bilateral lobar pneumonia on the sixth postoperative day. One died suddenly on the 4th postoperative day while apparently making an uneventful recovery. Cerebral embolism was found to have been the cause of death.

In 14 cases the right tube was involved, in 13 patients the left tube. There was one case of abdominal pregnancy of about four months duration in which the placenta was attached to the sigmoid and pelvic structures. This patient was in the hospital 21 days before coming to operation and was diagnosed "possible cystitis and pyelonephritis; possible incomplete abortion." Her postoperative recovery was satisfactory. There was one case of ovarian pregnancy of about five weeks duration.

The most interesting case of the series was that of Mrs. C. G., a white woman, 28 years old, who was admitted to the hospital on March 16, 1936 at 11:30 A. M. The onset of her present attack was about 7 A. M. at which time she was seized with an acute, knife-like pain in the lower abdomen while straining at stool. This was so severe as to cause her to faint. A physician was summoned at once, and he administered a hypodermic of morphine. The pain increased so much in severity that an additional hypo of morphine was given about an hour later. At about 10 a. m. shock became so pronounced the patient was sent to the hospital, a distance of twelve miles.

The menstrual history revealed a normal flow beginning January 18, 1936, approximately eight weeks before the onset of the present illness. There were several days in February and March that the patient noticed a little vaginal spotting of blood, but this was not enough to cause her to wear a pad.

Physical examination upon admission revealed a fair, white female, 28 years old, very acutely ill, gasping for breath, crying weakly for water to quench her thirst, complaining of extreme pain in the entire abdomen, more especially in the lower part and with marked pallor of all the mucus membranes. The temperature was 96 degrees Fahrenheit; the pulse rate 144 per minute, of very poor volume but regular; respirations 38 per minute, labored and deep, almost the air-hunger type of Kussmaul breathing. Blood pressure was 70/45. The skin was cold and clammy. Abdominal examination showed a board-like rigidity of the entire abdomen, especially in the left lower quadrant, with much pain on even light palpation. On pelvic examination the cervix was soft. The fundus could not be felt because of the marked rigidity of the recti muscles. The left adnexal region contained a mass about the size of a lemon. The cul-de-sac and right adnexal regions felt somewhat spongy. There was a great deal of pain attached to pelvic examination.

From the history obtained and the physical findings present a diagnosis of ruptured ectopic pregnancy with massive hemorrhage was made. While the patient was being prepared for surgery, 500 c.c. of six per cent gum acacia solution were given intravenously. Coramine and caffeine were both given intramuscularly. The patient was put in Trendelenberg position and external heat was applied. As soon as the acacia solution had been given, 750 c.c. of 5 per cent glucose in saline was administered by vein. In about an hour and a half from the time of admission the blood pressure rose to 98/70, and it was deemed expedient to do a rapid exploratory laparotomy. Donors were meanwhile being matched as the patient was carried to the operating room.

Under a light ethylene-ether anesthesia the abdomen was entered through a low midline incision about 10 cm. in length. The free peritoneal cavity was found to be filled with many blood clots and about 1000 c.c. of fresh blood. This was quickly cleaned out. A ruptured left tubal pregnancy was discovered, and the bleeding tube was clamped off. The right tube was found to be enlarged in the midportion to a size near 4 cm. in diameter. It was thought at first that this was probably a hemato-salpinx. However, it was deemed best to remove the definitely diseased organ. Just before the peritoneum was closed, about 1500 c.c. of warm saline solution was poured into the abdominal cavity. A blood transfusion of 750 c.c. of whole blood was given before the patient was moved from the operating room, and the pulse rate slowed down to 110 per minute with the pulse volume increasing. The blood pressure was then 108/75.

The postoperative recovery was uneventful, and the patient left the hospital on the twelfth day in good condition.

Pathological Report. Gross Description. Specimen marked "right" consists of oviduct measuring 70 mm. in length and with a rounded swelling in the middle measuring 35 mm. in diameter, filled with old blood clot which appears to be partially organized. The distal and proximal ends of the oviduct are 6 mm. in diameter, and the fimbriated end is matted together.

Specimen marked "left" consists of oviduct about same size as right except blood clot is fresh and shows membrane intact which measures 14 mm. in diameter.

Microscopic Description. Sections of oviduct marked "right" show well preserved chorionic villi with moderate fibrosis in the wall of the oviduct, containing scattered clumps of lymphocytes. In the lumen there is a distortion of the mucosal folds, partially organized blood clot and chorionic villi.

Sections of oviduct marked "left" show scattered clumps of lymphocytes with healing granulation tissue attached to serosa. Thickened mucosa folds and decidua reaction are present and well preserved.

Gross and Micro Diagnosis, Bilateral Ectopic (Tubal) Pregnancy

SUMMARY

1. Within the past thirty years the medical profession has become conscious of ruptured ectopic pregnancy.
2. The classical symptoms or ruptured ectopic pregnancy are present in the majority of cases.
3. Immediate operation as soon as shock can be checked or overcome will save many lives.
4. A series of 30 cases of ectopic pregnancy is reported with a case report of bilateral tubal pregnancy, one tube being ruptured.

TO THE MEDICAL PROFESSION OF MISSISSIPPI

Dr. T. M. Dye, secretary of the State Medical Association, reports that paid subscriptions for membership in the state association for 1937 up to Feb. 20 were 777, which is 126 less than the total membership for the entire year of 1936. No doubt by this time some will have paid and I hope before our association meets in Meridian in May the membership will show a decided increase over last year.

Some sections of the state have shown a greater delinquency than others and especially is this true of small county societies, four of which failed to show a single paid membership on Feb. 20. The same sections that report the greatest number of delinquents in paid memberships are also the sections which show the smallest per cent of members of the state association compared to the number of registered physicians.

One society shows a membership of 48 out of a possible 139, and another 56 out of 109, another 69 out of 144 registered white physicians. One councilor's district shows 81 per cent or 94 out of a possible 116, yet in this doctor's district one county failed to show any membership up to Feb. 20, although it had 4 members out of a possible 7 for 1936. I am glad to say the majority of the societies show up well compared to previous years.

I am requested that each councilor get in touch with the secretary of his local societies urging a canvass for not only the old members but all desirable doctors within his district.

W. L. LITTLE,
President-Elect

Wesson,
March 10, 1937.

Some Observations On Poliomyelitis*

H. C. RICKS, M.D.
Jackson, Miss.

There is nothing with which we have to deal in the practice of medicine that is so disheartening or saddening as to see a perfectly normal child almost hopelessly crippled for life by this disease—poliomyelitis (infantile paralysis). Small wonder that it has been a problem which has attracted the attention of many of our outstanding investigators, and while it is true that as yet there is no specific treatment which measures up to what we think it should, the progress which has been made is altogether encouraging.

Doubtless, greater progress would have been made towards a solution of this perplexing problem if it were not for the fortunate fact that epidemic poliomyelitis in so far as paralysis is concerned is a disease of comparatively low incidence. The material for study has been small consequently, and it has been difficult to determine easily the efficacy of the several protective measures which have been suggested in recent years.

Most of our worthwhile knowledge dates from the epidemics of 1907 and 1908, which were high in morbidity and mortality but proportionately fruitful in information. It will be recalled that it was in 1909 when it was determined that poliomyelitis could be communicated to monkeys by the intraperitoneal inoculation with a suspension of human polimyelitic nervous tissue. Soon after, Flexner and Lewis showed that the disease could be transmitted indefinitely from animal to animal. This gave us our first evidence that poliomyelitis was infectious and there could be no other conclusion than that the etiological factor is a living organism or virus that multiplies in the tissue. Microscopic examination of poliomyelitis tissues failed to reveal any visible microorganisms. It was then that the conclusion was reached that it was an organism, either beyond the range of the microscope or that it was of such a character that it would not take a stain. It soon became known, however, that the virus would pass through Berkefeld filters.

The next step in the effort to determine its etiology was when Flexner and Noguchi succeeded in growing a minute anaerobic globoid body from poliomyelitic tissue. Later they were successful in recovering these bodies after passage through monkeys. These cultivation experiments were repeated by Smith, and Amoss found small bodies morphologically identical with the Flexner-Noguchi organism. Later, however, Amoss failed to discover any immunological relation between the globoid bodies and the filtrable virus. In any event, these studies have failed to be helpful in the control of the disease.

Several investigators endeavored to associate a strain of streptococci with poliomyelitis. Conspicuous among these were Rosenow, Nuzum, and Mathers. In spite of insistence to the contrary, Bull has shown that none of the streptococci is capable of producing experimental poliomyelitis. Smillie expressed the belief that the streptococcus could not be implicated in the pathology of the disease and that it was either a frequent contaminating organism or a secondary invader. Amoss and Eberson later found that the serum which had been deeveloped by Rosenow and by Nuzum and his co-workers from the strain of streptococci suspected had neutralizing powers neither *in vitro* nor *in vivo,* nor any therapeutic property in monkeys.

Notwithstanding these contradictory results, interest was awakened in the use of the streptococcic serum for the prevention and treatment of poliomyelitis. So Long, Olitsky, and Stewart again studied the cultivation of poliomyelitic tissues to determine, if possible, the source of the streptococci, which have been suspected of being the causative factor. Their investigation corroborated the conclusion that they were nothing other than agonal invaders.

For the present, therefore, the conflict of opposed opinion concerning the streptococci as a cause of poliomyelitis leaves the question unsettled. In the meantime, the Council on Pharmacy and Chemistry has decided to refuse to accept any poliomyelitis anti-streptococcus serum until more evidence of its usefulness becomes available.

Experimental and epidemiological considerations indicate that the usual natural route of infection in poliomyelitis is from the nose by way of the olfactory tract. Lennette and Hudson, by an ingenious experiment, have recently (1935) further emphasized the importance of this route of infection. These investigators sectioned the olfactory tract of five monkeys and then intravenously inoculated them, together with five intact controls, with 10 c.c. of a 10 per cent poliomyelitis virus, on each of three successive days. Four of the five controls succumbed to poliomyelitis, while the five animals whose olfactory tracts were sectioned all remained well.

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*Read at the Sixty-ninth semi-annual session of the Clarksdale and Six Counties Medical Society, Clarksdale, Nov. 4, 1936.

Lennette and Hudson feel that infection by the intravenous route is dependent upon the virus escaping from the blood stream to the nasal membranes, from which infection of the nervous system proceeds by way of the olfactory tract. In further support of this contention, these authors recovered poliomyelitis virus from the pooled nasal washings collected from three monkeys four days following the first intravenous inoculation.

Armstrong and Harrison recently showed that intranasally instilled picric acid tends to prevent subsequent poliomyelitis infection of monkeys with virus introduced by the same route. It was deemed of interest, therefore, to determine whether intranasally instilled picric acid would similarly tend to prevent intravenously inoculated poliomyelitis.

Nine monkeys were each given eight intranasal instillations of 1.5 c.c. of 0.32 per cent of picric acid in saline into each nostril; these nine prepared and nine untreated control monkeys were then inoculated with two or three intravenous doses of poliomyelitis virus. The inoculum was prepared by grinding portions of several gylcerinated cords and diluting with saline to make a 4— to 8— per cent suspension. The mixture was then centrifuged and 5 to 10 c.c. of the supernatant fluid was intravenously injected on two or three successive days, controls and treated animals being identically handled.

Many of the monkeys reacted to the virus injections, immediately developing what appeared to be a severe anaphylactic shock from which they recovered after a few minutes.

Among the nine picric-acid-prepared animals there were two deaths from poliomyelitis, both on the seventh day, and one from dysentery on the 13 day; the latter showed no clinical or pathological evidence of poliomyelitis. There were, on the other hand, six deaths from poliomyelitis among the nine control monkeys, while another developed high fever on the 11th day, with suggestive symptoms. The animal developed no paralysis, however, and the cause of the illness is questionable. It thus appears that picric acid instilled into the nostrils tended to prevent intravenously inoculated poliomyelitis.

Peat, of Ann Arbor, Michigan, in order to determine if the method recommended for spraying human beings with the alum picric acid reached the area of the nose involved—the olfactory nerve—sprayed a group of individuals with a solution which resisted the x-ray and later made x-ray films to determine the extent of the spread of the solution. His experiment showed that if there was no anatomical obstruction, such as, an enlarged middle turbinal, that the spray could be depended upon to reach the area of the nose involved—the olfactory nerve.

The normal expectancy of poliomyelitis is about 1.3 cases per 100,000 population in the South but during epidemic periods may go as high as three cases per 100,000 and in one of our towns has reached one case per 1,000.

Without making a study of the complexions of the general population to determine the ratio of blonds to brunettes, the conclusion reached in Mississippi seems to indicate that blondes are apparently more susceptible to poliomyelitis than brunettes. In order to determine if this is true, a study of the complexion distribution of the population of the state would be necessary. The male is attacked more frequently than is the female. On a population distribution this would be expected.

Negroes seem to be less susceptible than whites. Of the 133 cases reported in the State of Mississippi since July 1, 1936, only 36 have been negroes.

There were 76 cases of poliomyelitis in males and 57 cases in females. The following table shows the distribution of cases by age groups:

Age Group	*Number of Cases*
Under 1	11
1 to 4	68
5 to 9	26
10 to 14	13
Over 14	13
Age Unknown	2
Total	133

The peak of the Mississippi epidemic occurred on Aug. 16. The last case reported Nov. 2.

The Mississippi State Board of Health has cooperated with the Division of Rehabilitation of the State Department of Education in the holding of clinics for the cases of poliomyelitis that occurred during the recent epidemic. The following table shows the location of the clinics, the number attending the clinics, and the number of casts applied.

Location	Attendance	No. Casts Applied
Iuka	14	7
Tupelo	16	12
Corinth	9	5
Columbus	10	5
Clarksdale	14	7
Columbia	6	3
Centreville	4	3
Total number clinics held 7	73	42

DISCUSSION:

Dr. George W. Mast (Lexington): Dr. Ricks has given us an excellent paper on some of the experimental work that has been done on poliomyelitis and part of the work the State Board of Health did during this past epidemic. However, I think it would be well for us to review some of the epidemiological facts surrounding this discrease in order that we may intelligently evaluate some of the measures used in its control.

The present pandemic of infantile paralysis began in Sweden in 1881 and extended over northern Europe and to the northeastern portion of the United States. The first outbreak of the disease in the United States was reported by Calvery in Rutland, Vermont, in 1894 in which there were 132 cases. From 1900 to 1910 the outbreaks increased in size and number both here and abroad. However, of the 8,054 cases reported in the five-year period 1905-1909 we contributed 5,514 cases or about 5-7 of the total number. In 1916, the worst outbreak occurred in the history of the world in which there were 29,000 cases with 6,000 deaths. Of this New York City alone contributed 8,298 cases and 2,407 deaths. Since that time the disease has spread all over the United States but mostly in a southwestern direction.

It is a warm weather disease and in the northern hemisphere occurs mainly from May to November, while in the Southern hemisphere from November to May, but outbreaks do not occur in the tropics.

We say its spread is by the discharges of the nose and throat, yet all other diseases that spread this way occur in the winter months when crowding, etc., are more prevalent. It is probable that we are partly wrong and that it spreads like typhoid in that several modes of spread may exist. Two outbreaks in the United States have been traced to raw milk, at Courtland, New York and Spring Valley, N. Y. Also, why do we not have more multiple cases in the same family? Only 1.3% of 8,634 families in N. Y. had more than one case.

Much work has been done to prove an insect carrier but none successful. Two investigators, Rosenau and Brues, showed that the stable fly can carry the disease. This was confirmed by Anderson and Frost but none of them has been able to repeat their experiments successfully. The house fly may carry the disease for about forty-eight hours but this is too short a time to account for the spread. It has long been suspected that some animal reservoir of the disease existed but we have been unsuccessful so far in finding this source. The disease closely resembles plague in its spread in that it attacks mostly rural areas. Its attack rate is higher in rural communities. It also spreads along lines of communication, particularly roads and in other ways resembles the spread of plague. Richardson believes rats are responsible but that is yet to be proven. The discharges of the alimentary tract have been shown also to contain the virus at times. It will live in water for 31 days and about the same time in sterile milk.

The favorite theory is to assume that it is extremely widespread and prevalent over the nation as a whole and that nearly all cases are so mild as to be missed. We know that there are many more cases than those developing paralysis but we do not believe this theory could possibly account for all the factors that are present in an epidemic of infantile paralysis. We will have to look to the future for the solution to this problem and hope that it will not be far off.

HOSPITAL INSURANCE

At a meeting of the executive committee of the Council of the Mississippi State Medical Association, recently held in Jackson, the editor was requested to inform the members of the Association that the Council has as yet approved no plan of hospitalization insurance, that various plans for such insurance are being studied and that for the sake of unity the greatest good to the greatest number, members of the Association should await the results of these studies and approval of the Council.

Jackson, March 2, 1937.

Spina Bifida

REPORT OF THREE CASES

H. LOWREY RUSH, M.D.
and
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MERIDIAN, MISS.

Introduction

It has been estimated that forty-seven babies are born with spina bifida in Mississippi each year. Of this forty-seven, twenty-four are so far advanced that they could not be benefited by surgery. Of the remaining twenty-three sixteen would probably be offered a normal existence by surgery. The remaining eight would probably succumb as the result of hydocephalus, meningitis, leakage of the cerebro-spinal fluid, broncho-pneumonia, or shock following operation. Should these twenty-three patients not be operated upon the mortality would, probably, be ninety-five per cent inside one year. In others words, one out of the group would be likely to survive without surgery. In those cases, where there is a leakage with infection of the cerebro-spinal fluid, rapidly increasing hydrocephalus, or where the baby is hopelessly crippled, operation is, of course, contraindicated. In all other cases the indication and time of operation are at the discretion of the individual, however, it is felt that the operation should be done at the earliest possible moment that the general condition of the baby justifies the procedure. Individual cases present certain obstacles and problems which tax the ingenuity and originality of the surgeon.

CASE NO. 1, Baby F. E. M., Female Infant, Age, 4 weeks

Entered Rush's Infirmary December 20th, 1934 because of a bulging mass over the mid-portion of the dorsal spine. On examination was found a meningocele about two and one-half inches in diameter which was not covered by skin, giving the appearance of a very thin walled serous membrane filled with fluid. Diagnosis of meningocele was made. The mass appeared to be in the region of the third, fourth and fifth dorsal vertebrae. Over the dome of the sac was an ulcerated area about three-fourths inch in diameter. This wound was cleansed twice daily with boric acid solution and dusted with boric acid powder. It was protected from the bed clothing by strapping in place a small tea strainer. She was placed on artificial feeding by Dr. G. L. Arrington. The baby was hospitalized one month and operated upon at the age of two months. One hour before operation the baby was given ½ grain of phenobarbital.

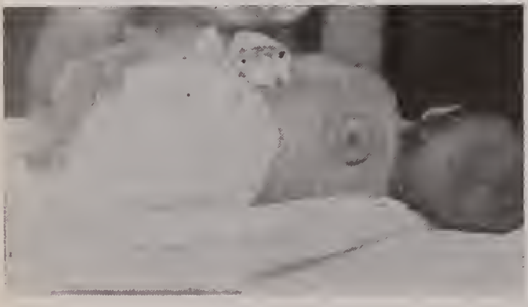

FIGURE 1, CASE I
Dorsal Meningocele

Operative Findings

Under open ether anesthesia, a transverse elliptical incision was made extending down to the fascia for a distance of four inches, passing completely around the sac by sharp dissection. The skin was raised and the neck of the sac exposed, demonstrating lack of fusion, apparently, of the third, fourth and fifth dorsal vertebrae. The sac was opened and very little spinal fluid escaped. The sac was very edematous and contained no nerve structures. The sac was cut away to within one-half inch of the vertebral cleft, and closed by double rows of fine silk running sutures. A muscle flap was fashioned from the trapezius muscle, on either side, and turned over the cleft, making a double roof of muscle, the flap being held in place interrupted and mattress sutures of black silk and No. 0 cat gut. The skin edges were undermined for a distance of two inches and a transverse incision made two inches below the primary incision, the entire flap being undermined and elevated in an effort to close the raw surface over the affected area. At the central portion, a gap of about three-fourths of an inch was necessarily left without skin covering. Both wounds were sutured at the extremity, skin to skin, with interrupted stitches of black silk. In the mid-portion the skin and fascia were sutured to the muscle with black silk. Sterile dressing was applied.

Progress Notes

There was very little shock following the operation. On the third day both fontanels were prominent and were tense to pressure.

This pressure gradually abated. At the end of one week the stitches were removed. The baby was seen in the Out-Patient Clinic for dressings. No infection occurred, and healing was complete in six weeks. At that time there was moderate enlargement of the head and tense fontanels.

Follow-Up

On April 25, 1936, the baby was eighteen months old. She was able to stand alone. The head appeared normal, the greatest circumference measuring nineteen inches.

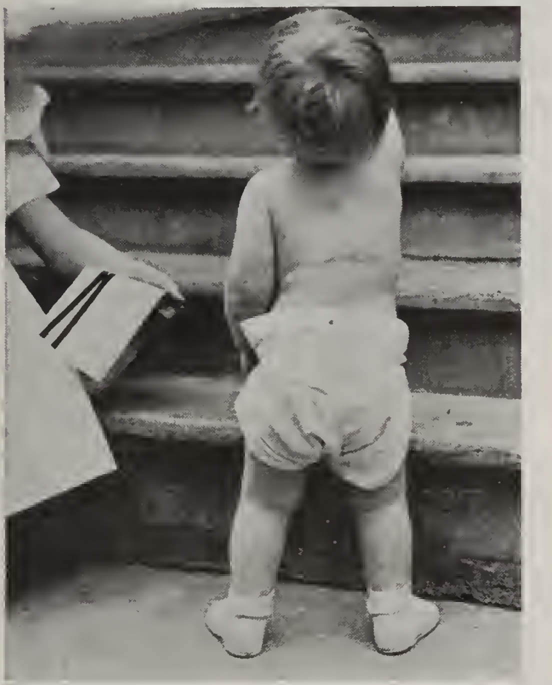

FIGURE 2, CASE I
Thirteen Months After Operation

CASE NO. 2, Baby L. S.

Admitted to Rush's Infirmary Clinic April 10, 1935, at the age of three months, having been referred by Dr. C. A. Jackson, of York, Alabama.

Examination

A mass 3½ inches x 3 inches was present over the lumbosacral area. (Fig. 3, Case II) It appeared to be a fluid filled sac covered by parchment membrane, only a portion of the periphery being made of skin. Over the dome was an area one inch in diameter which was eroded, and from which a small amount of serum exuded. The head was not enlarged, both fontanels were normal and did not appear to be distended. Both feet were in calcaneal deformity, and the dorsal extensors of the feet appeared to be unopposed by the calf muscles. This baby appeared to be in remarkably good physical condition. Operation was deferred for five days. The baby was placed on artificial feeding by Dr. Arrington, and on April 15 operation was performed. Three hours before operation the baby was given ¼ grain phenobarbital and it was repeated two hours later.

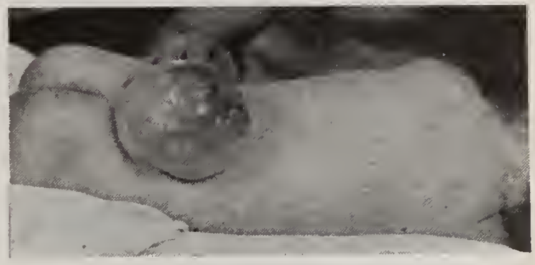

FIGURE 3, CASE II
Lumbosacral Myelomeningocele

Operation

The skin was attached to the proximal third of the meningocele. A circular incision was made at the border of the skin, and the skin flaps, were dissected free. The sac was dissorted down to its neck and then opened. It was found to contain a few nerves. The nerves were attached to the dome of the meningocele. They were cleared, without injury, from the sac and returned to the spinal canal. The sac was excised and sutured, making a new roof over the spinal canal. A large bony defect 1½ inches in diameter, which appeared to be over the first and second sacral vertebrae was found. There was no additional muscle or fascia which could be used. The sac was sutured and overlapped using double running sutures of fine black silk. Beginning at the sides of the original circular incision two curvilinear incisions were made, one on each side passing upward and laterally, exposing the lumbar fascia. A flap was dissected from either side, the lumbar fascia turned down and sutured with black silk, but did not completely cover the opening. To supplement the lumbar fascia two strips of beef fascia were sutured in a zig zag fashion across the bony cleft, being fixed on either side by interrupted sutures of fine silk. The skin edges were fashioned. The subcutaneous tissue was closed with interrupted sutures of fine black silk. Interrupted black silk sutures were used for the skin.

Immediate Post-Operative Condition

Moderate shock.

Progress Notes

Patient recovered from the shock rapidly. He was not dismissed from the hospital for three weeks, post-operatively.

Due to the large surface and the quanity of foreign material which it was necessary to use, the serum accumulations in the wound were troublesome and required frequent dressings. There was no marked increase of intercranial pressure during the first few days after operation, but for the next several months the fontanels were tense and large. An hydrocephalus was apparently developing. The baby was sensitive to silk, and for a period of six months, at intervals of one or two weeks, small serum pockets would accumulate near the mid-portion of the wound, and at varying intervals, a fine black silk suture would protrude. After the passage of the rest of the silk the wound healed normally. The health of the baby has been excellent. He has been at frequent intervals in the Out-Patient Clinic. The baby has grown very rapidly. For the past several months the head has ceased gaining in circumference; the expression of the baby has approached normal.

Follow-Up

April 25, 1936, one year after operation, fifteen months of age for the baby, the expression of the child is that of a normal infant fifteen months old. The greatest circumference of the head is twenty-one inches. There is still some weakness of the calf muscles of both legs, but with the aid of good shoes the baby is able to stand alone by holding on to objects. Although there is moderate enlargement of the head, it appears to be compensated by the fact that the baby is thirty-three inches tall and weighs thirty-six pounds. It would seem that a normal baby of this size and weight and age would have difficulty standing alone. (Fig. 4, Case II).

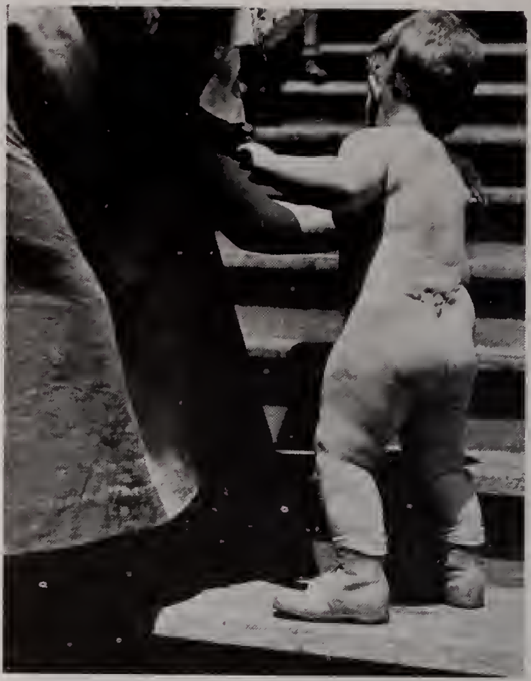

FIGURE 4, CASE II
Age 15 Months. The Baby is Over Size. Some Weakness of Ankles.

CASE NO. III, Baby W.

Baby W. was thirteen and one-half hours old when he was admitted to Matty Hersee Hospital, June 2, 1935, having been referred by Dr. R. J. Wilson, Bailey, Mississippi. The baby was found to have a tumefaction completely covering the sacral area, measuring about 4x3½ inches extending almost to the anus. (Fig. 5, Case III).

Over this entire area the skin was markedly thickened with linear crevice-like invaginations as if the skin was drawn inward by trabeculae. The anus was intact and the bowels moved normally. The fontanels appeared to be normal, the head was not enlarged, and no other abnormality was noted.

Pre-operative Preparation

The baby was on a formula feeding by Dr. G. L. Arrington immediately. One month later orange juice was begun.

Operative Procedure

On July 24, at the age of seven weeks, the operation was undertaken. An hour and one-half before the operation, the baby was given ten drops of paregoric. A circular incision was made around the tumor mass. Under open ether anesthesia three radial incisions were made, passing peripherally from this incision. The skin and superficial fascia were dissected free. The mass dissected down to a pedicle which was firmly adherent to the coccyx. The sac was opened. It was found to end bluntly at the coccyx. It was found to be lined with a serous membrane contain-

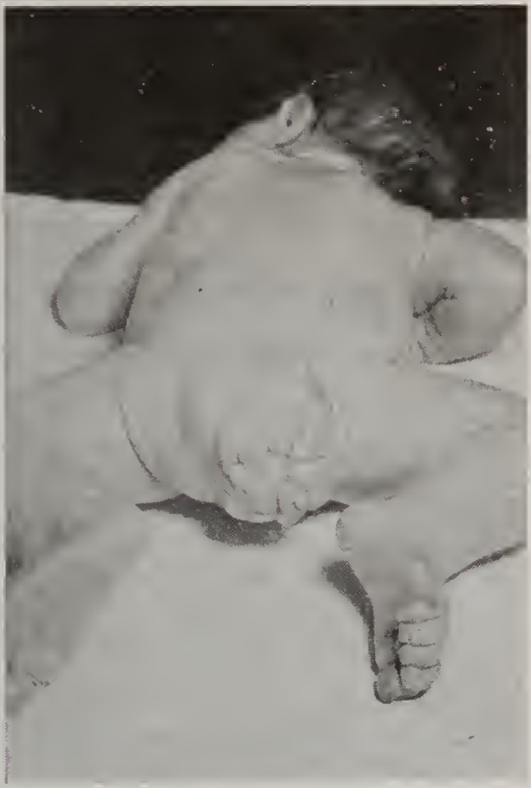

FIGURE 5, CASE III
Sacral Meningocele

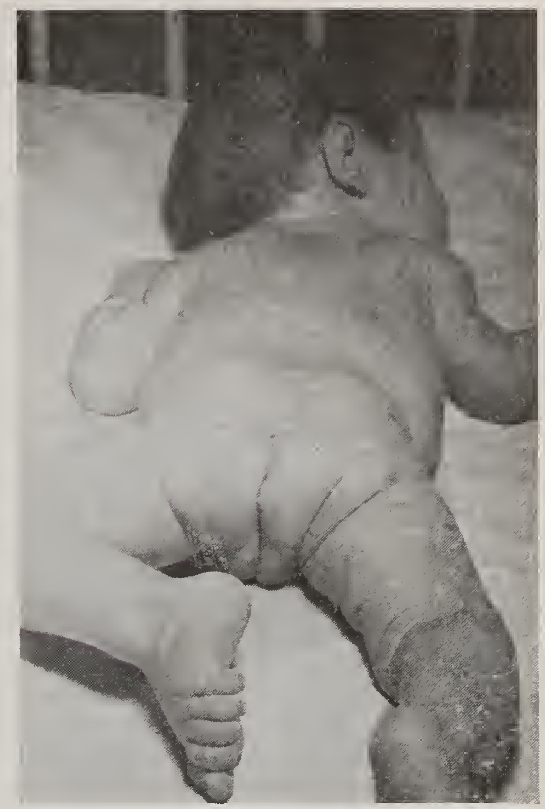

FIGURE 6, CASE III
One Year After Operation

ing a small amount of fluid, apparently, having originated from the meninges, and later having been closed off by fusion of the vertebral body. The coccyx was disarticulated at the sacrum and removed with the mass. The pedicle was ligated with plain No. 1 cat gut. All bleeding points ligated, fascia approximated with chromic 00, interrupted catgut sutures. A portion of the skin edges was removed to facilitate closure. Fine black silk was used for the skin. Wound was covered with collodion dressings.

Due to the fact that soiling from the bowel movement was anticipated, a plaster cast had been made and bivalved extending from the level of the nipple to the toes of both extremities, with abduction of both hips. From this cast an anterior and posterior plaster shell was fashioned. At the place of operation the baby was placed in this cast, and for the first several days, post-operatively, was kept on the abdomen. Wound healed uneventfully . Baby was discharged from the hospital August 17, 1935. The wound was completely healed. (Fig 6, Case III).

The head was not abnormally large, nor was there any bulging of the fontanels.

Follow-up

April 20, 1936. Baby is eleven months old, developing normally, no evidence of hydrocephalus. She is able to stand alone by grasping objects.

Discussion

From a survey of the literature upon this subject, and our own observations on this small group of cases we feel that the services of a competent pediatrician are essential to the successful management of the case. Adequate care of the covering of the sac, some type of mechanical covering, to prevent irritation and rupture, adequate cleansing and protection of eroded areas, diligent attention to the nourishment and general care of the baby are essential factors. If operation can be safely deferred, it should not be undertaken one month, and preferably two. This, however, is not an inviolable rule, and must be altered at the discretion of the surgeon.

DISCUSSION

Dr. Robert B. McLean (Jackson): The presentation of Doctor Rush is a strong reminder to those of us who have regarded spina bifida as a hopeless condition, that it is not always necessarily so.

Of the 47,905 children born in Mississippi during 1934, 108 of them died of malformalaties. Of this number we do not know the exact number of deaths due to spina bifida although 13 were so listed. The doctor estimates that 47 babies are born each year with the condition. Keen, in 1907, estimated that 1 in 1000 babies were born with it; which estimate varies only slightly with that just offered.

The decision as to which cases are hopelessly crippled and are accordingly to be denied the benefit of surgery would seem a difficult one to make. Spina bifida is a congenital defect in the development of the embryonal mesoblastic layer, which gives the simple meningocele, and (or) the ephiblastic layer, which gives the myelomeningocele and rachischisis. It is in effect a herniation of the meninges which sometimes contain neural elements, and is of necessity treated like a hernia. This analogy holds true in the repair of the defect, treatment having progressed from needling through injection to excision or infolding of the sac; and as in hernia every substance from silver wire mesh to heteroplastic grafts has been used to cover the defect, only to be discarded (Keen, Ellsberg). Other developmental defects are commonly associated. Smith, in 1936, went so far as to state that all children with spina bifida showed some deformity of the feet, although it was not always bilateral. This deformity may vary from a slight defect—through dislocation of the hips—to complete paralysis with trophic changes. Incidentally he even advised x-ray of the spine for spina bifida occulta before correction of any foot defect, as more radical measures are necessary in the presence of neural involvement. Consequently, in determining operability many factors must be considered:

First: The presence or absence of infection. Leakage of spinal fluid is not a contraindication but a demand for emergency treatment.

Second: Whether or not hydrocephalus is present.

The majority of authors found that the operation with excision of the sac usually increased the degree of hydrocephalus existing and frequently precipitated its onset. However, since the recognition of the importance of the Arnold-Chiari phenomenon and the bearing which it has on hydrocephalus where the sac is excised, the adoption of the procedure of folding the sac which was introduced by Schmidt and perfected and emphasized by Penfield and Core in 1932, has lessened the fear of this condition. This was strongly emphasized by Siris in 1936 when he reported two small series of cases operated upon: the first of 32 primarily successful cases treated by excision in which 7 of 8 having hydrocephalus were increased in degree, and 4 cases of hydrocephalus were precipitated, contrasted with a series of 5 cases with one case of hydrocephalus not increased, and 4 in which none were precipitated.

Third: The existence of definite peripheral nerve involvement. Here again there is divergence of opinion. Moore, in 1905, summarized the operative results obtained as follows: "With few exceptions about all that can be expected from the operation is the relief of an annoying and unsightly tumor and the prevention of meningitis from rupture or ulceration." On the other hand Lebrum reported a case of myelomeningocele with paralysis which recovered following operation, and some of the other authors report improvement of the nerve involvement by operation. Cutler and Coughlin even advise the use of pre-sacral neurectomy for spastic paralysis of the bladder and rectum.

Fourth: The number and degree of other deformities.

With present day orthopedic standards as advanced as they are, few skeletal defects would constitute a contraindication.

Fifth: The character and quality of the coverings of the sac.

Keene, in 1907 advised against surgery where the skin is normal and there are no symptoms due to the tumor. However, these cases should be watched for symptoms of cord traction during the growth period.

Sixth: The character of the tumor.

Results from good to hopeless may be anticipated from meningocele tumors to rachischisis, respectfully.

Seventh: The location of the tumor.

A simple high tumor offers a poorer anticipitated result than a more complex low tumor. Those located below the 11th dorsal vertebra operation is as the doctor says—at the earliest possible moment, although Moore and others advised waiting for five or more years. It is now felt that many lives are saved by the earliest repair. Coughlin, in 1931, reported 12 cases operated upon between the ages of 16 hours and 7 months, and found that those under 4 days of age stood the operation best.

The doctor mentions the use of posture for the prevention of soiling and for drainage. I would like to ask if his associate pediatrician endeavors to produce any dehydration by the diet prescribed?

I have enjoyed Dr. Rush's presentation and think that he is to be congratulated on his results in these cases. Perhaps surgery in this condition is not capable of spectacular results comparable to the removal of an acutely inflamed appendix or an obstructing stone; certainly it is more fraught with danger and difficulty. I think that more of a service is rendered society by giving it a normal young individual from a potential mental and physical cripple, than by giving it a living normal from a near-dead living normal.

DR. H. LOWRY RUSH (closing): I appreciate the discussion very much.

It is estimated that probably one in one thousand babies are born in this condition and I want to urge upon you the importance of putting these babies under the care of a pediatrician and a surgeon at the earliest possible moment.

We had one baby who was brought to the Infirmary when it was thirteen and one-half hours old, and we kept it there a month before operation was attempted in order to feed it properly and build it up as much as possible.

It is very necessary to treat them carefully to avoid the spilling of the spinal fluid as the sac sometimes ruptures very easily. To diminish this spill during the operation, we lower the baby's head and elevate the buttocks.

We usually take the baby off the breast as we feel it is better to feed it artificially than to have it handled in the mother's lap.

As to the use of silk, this second baby seemed to have developed some form of idiosyncrasy to any form of foreign material. In this case we had a great deal of difficulty in finding something to close the opening. Due to the scarcity of fascia in this region we substituted beef fascia, suturing it at the sides with fine silk. We were afraid to catgut due to its being absorbed too early, so that is why we used the silk in this case. I think it is perfectly safe to use silk where there is no infection. I understand that the English use quite a bit of cotton thread and that they claim to have no trouble with it, and don't think we would have had trouble with this baby except for the fact that he developed a slight discharge of spinal fluid which caused the wound to get slightly infected.

There is no particular rule, you have to work out each spina bifida in whatever fashion seems to be the most appropriate for that particular case.

Tonsillectomy: Indications, Methods, Results*

D. W. HAMRICK, M.D.
Corinth, Miss.

This is not inteded to be a scientific paper in the usually accepted sense of the word, but it is hoped that it may be informative in that it presents the patient's viewpoint on the subject.

As to definite, clear-cut, conclusive indications for tonsillectomy I think that almost any man of proper training and experience in the field of oto-laryngology would give about the same answer. Hunnicutt lists them as (a) "repeated attacks of sore throat with or without systemic reaction; (b) history of frequent or periodic sore throat in patients with diseases commonly attributed to focal infection as arthritis, muscular rheumatism, and conditions of toxic origin; (c) presence of capillary injection in faucial pillars together with the presence of purulent tonsillar exudate."

There are only a few conditions locally, that constitute definite indications for tonsillectomy. Simple hypertrophy in most cases is not a conclusive indication. Simple hypertrophy in most cases is not a conclusive indication. It has been proved histologically that section of tonsil tissue from clinically proved cases of recurrent tonsillitis presents striking similarity to sections taken from tonsils with no history of recurrent tonsillitis. It follos then that the gross appearance of the tonsil itself cannot be taken alone as a conclusive criterion for tonsillectomy. The local findings are of vast importance only when taken as a part of the whole clinical picture. It is this clinical picture as given in this paper relative to the indications for tonsillectomy or tonsillectomy and abnoidectomy as the case may be. As to methods, I shall touch only on the methods used in this series, touching briefly upon the post-operative care and convalesence. The results given in this paper are those given by the patient in response to questionaires mailed to this series.

This study is based on a series of 500 cases. It was hoped to cover and present our whole series of cases which was much larger, but the great amount of time and work involved in getting correct addresses for follow-up, and tabulating and correlating all the data made the task prohibitive.

The clinical indications here presented represent the order of relative frequence of chief complaint as stated by the patient on 500 hospital histories.

Of this series of operated cases approximately 40 per cent were tonsillectomy and adnoidectomy and 60 per cent tonsillectomy. The youngest patient operated upon was 23 months ,and the oldest 68 years.

Nable No. 1 gives the chief complaint only of the patient before operation was passed upon. Of course, in most o fthese cases there were multiple complaints to be considered along with the local conditions before operation was decided upon.

TABLE NO. 1

Order of Relative Frequency of Chief Complaint Based on Analysis of 500 Hospital Histories.

Frequent Colds	144	Appx.	28 %
Poor General Health	104	Appx.	20 %
Bad Breathing	17	Appx.	15 %
Rheumatism	40	Appx.	8 %
Recurrent Sore Throat	33	Appx.	6 %
Kidney Trouble	26	Appx.	5 %
Heart Trouble	22	Appx.	4 %
Deafness	6	Appx.	1 %
Recurrent Middle Ear Infection	5	Appx.	1 %
Quinsy	5	Appx.	1 %
Weak Eyes	4	Appx.	0.9%
Deep Eye Infection	4	Appx.	0.9%
Stomach Trouble	2	Appx.	0.5%
Headache	2	Appx.	0.5%
Other Causes	24	Appx.	5 %

As to methods of doing a tonsillectomy, there is no ideal method. The best method for any individual is the one he feels he has mastered and does best. In this series approximately 100 cases were done with a Beck-Schenk modification of the Sluder-Beck instrument. I abandoned this except in select cases, for blunt dissection and snare for two reasons. First, the large number of submerged tonsils in adults that I could not properly engage, and second, after about one year I began seeing some throats that immediately after operation seemed to have beautiful intact anterior faucial pillars, but at this later date showed almost an absence of anterior pillars.

In the control of bleeding after reasonable sponging with gentle pressure, all bleeding vessels in sight were caught with Allis forceps and ligated by the Coakley slip-knot method. No. 0 plain Pykotannin catgut is my choice of ligature due to the fact that it has exactly the right stiffness for this method of ligation. Approximately 2 per cent of our series had post-operative bleeding requiring hemostasis before leaving the hospital. Hemostasis of choice in most of these was finding the bleeding vessel and ligating. Approximately 1 per cent of this series had late hemorrhage occuring from the 4th to 10th post-operative day, of sufficient severity to necessitate the physician's attention. Serious hemorrhage occurred in only one case of this series, and that was in a young man 17 years of age, and this occurred on the 7th post-operative day. This was finally controlled after other methods had been exhausted, by continuous pressure for 12 hours with gauze sponge held in place by tonsil hemostat in hands of the operator. This was arterial bleeding caused by a slough. Aside from considerable weakness from loss of blood he made an uneventful recovery. Self retaining in and out clamps were used in only one case, a young man 23 years of age with a hypertension of 220 and kidney involvement for which the operation was advised by family physician. This was immediately post-operative for the control of oozing. The clamps were removed at the end of three hours and convalesence was uneventful, except that the patient never paid. All patients in this series were required to stay 24 hours in the hospital. Ice bag was applied to the throat for the first six to eight hours. Convalesence in this series averaged from seven to ten days.

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*Read before the Section on Eye, Ear, Nose and Throat of the Sixty-Ninth Annual Session of the Mississippi State Medical Association, Greenville, May 6, 1936.

As to results this study covers replies to questionaires received from a little over three hundred out of five hundred patients I attempted to contact by questionaire. The period elapsed since operation varies from one to eight years. (This is worthy of emphasis).

Table No. 2 gives the tabulated percentage of results based on 300 questionaires returned and I think this information is of rather striking importance.

TABLE NO. 2

Patient's Statement as to Results Based on 300 Questionaires Returned.

Decidedly successful	78.2%
Fair	18.9%
Of Little or no Benefit	2.9%

From data furnished by the patients on these questionaires Table No. 3 was tabulated, and shows the relative frequency of specific improvement noted as result of tonsillectomy or tonsillectomy and adnoidectomy as the case may be. A study of this table I believe, gives us a reasonably accurate basis of what we may promise the patient as a result of a clinically indicated tonsillectomy.

TABLE NO. 3

Order of Relative Frequency of Specific Improvement as it was Stated by Patients Based on 300 Questionaires Returned.

Improved general health	179
Gain in weight	135
Less frequent colds	127
Improved breathing	64
Less frequent sore throats	35
Relief from rheumatism	32
Relief from kidney trouble	16
Relief from heart trouble	14
Improvement in school work	5
Relief from headaches	5
Less nervous	5
More pep	4
Relief from middle ear infection	3
Improvement in deafness	3
Relief from deep eye infection	3
Relief from stomach trouble	3
Improvement in hay fever	1

The prize reply to questionaire lists the operation as "decidedly successful, result—two babies expecting another."

CONCLUSIONS:

(1) That the indication for tonsillectomy is by far more often general. than local.

(2) Being careful to select one's cases on the basis of clinical indications the patient may be assured of a decidedly successful result in about 80 per cent of cases. In short, as in the case of the proverbial appendix, if the tonsils need to come out results in most cases may be assured.

DISCUSSION:

DR. S. B. CARUTHERS (Grenada): Dr. Hamrock's paper is very definitely in my mind not just another paper on tonsils. He has given us some very good information which I am sure all of us would like to know about concerning our own cases if we had the time and energy to follow them up. These statistical facts which he has give nus will be a real asset to the literature for those of us who in the future may want to study up on this question.

His remarks about the anterior pillars interested me very much. I have had the same experience. For several weeks or months after the operation there is a well defined fossa with both anterior and posterior pillars. After six months to a year there is frequently no fossa, the scard tissue having contracted and drawn the pillars. After six months to a year there is frequently no fossa, the scar tissue having contracted and drawn the pillars together. This is of very little inconvenience to the average patient, but there are a few people who are sensitive to these small changes and complain of their throat not feeling natural any more. My impression of this is that the scar tissue pulls them together because we remove the plica triangularis, the little mucous membrane that goes across the lower third of the tonsil from the anterior pillar to the base of the tongue. In several cases I tried dissecting this off carefully and leaving it, but a fair percentage of these cases had the lower pole recurrences that occasionally give trouble. Now I make it a rule to get the plica triangularis with the lower pole. In my own throat I would rather have it left in there. I would like to hear some other discussion on the anterior and posterior pillars being matted together.

Dr. Hamrick's statistics as to hemorrhage seem very good to me. I have no definite figures of my own, but I do not think they are as good as his. In my first month in practice I removed tonsils of five children in one family, all charity patients, and of these five three had hemorrhages. All had normal bleeding and clotting times. I was at a loss to explain it until I talked to the father. He told me that they were all subject to nose bleed, that he, himself, had had nose bleed for years. About five years before he had heard that if he would carry a buck-eye in his pocket he would not have any more nose bleed. He did so and had no nose bleed until one day, recently, when he forgot and left his buck-eye at home. His nose bled that morning. He was sure the buck-eye worked. Of these children only one of them had to have anything done for the hemorrhage. They did not bleed profusely, one little girl requiring post-nasal plug for about 10 hours, the other only a tonsil sponge for 30 or 40 minutes. Of the first 100 tonsillectomies I did in private practice there was only one primary hemorrhage; that was on a 68 year old lady, and she had to have a suture in her throat. I had one secondary hemorrhage that required suture and there were three secondary tonsil hemorrhage that required only some slight packing; there were also two adenoid hemorrhages which required no treatment other than removal of the blood clot. All of these would give about 9 per cent hemorrhage in my first 100 cases, but careful analysis of these shows that most of them would not ordinarily be called hemorrhages.

I want to repeat that I think Dr. Hamrick has given us some real definite information in a few well-chosen words.

Dr. E. H. Jones (Vicksburg): I think that was a mighty good paper, but I do not want to discuss the paper, I want to discuss the the discussion.

In particular, I want to discuss secondary hemorrhages due to post-operative infection. If you will look at the fossae every day after operation, you can frequently tell the cases that are likely to hemorrhage. The first scab is yellowish white, perfectly normal. If on about the third day you see a little spot about the size of a match that is red, take a culture and you will very likely find a growth of streptococcus. If untreated, hemorrhage will likely follow. It has been my practice—it was suggested to me by Dr. Montgomery—to use methylene blue in these cases. Since I have used it regularly, I do not think I have had a single hemorrhage from infection.

Dr. hugh H. Johnston (Vicksburg): I would like to say one word about these cases of persistent hemorrhage following tonsillectomy, also certain cases with persistent nose bleed without an apparent cause, with normal coagulation and bleeding time and normal blood calcium. I had four of these cases, and as a last resort we put these patients on a high vitamin C diet and cevitamic acid, since it has been shown that vitamin C has a definite effect on capillary permeability. Some of these responded immediately.

Dr. J. P. Wiggins: (Cleveland): In checking up post-operative hemorrhages we have found that the vast majority of thse cases show acidosis. We have adopted as a routine giving bicarbonate of soda three or four times daily for one week and are confident we have fewer secondary hemorrhages since we have adopted this treatment.

Dr. Hamrick (closing): I appreciate greatly the very free discussion we have had on this paper. I was perhaps a little misleading on percentage of hemorrhage. My cases I believe as Dr. Caruthers stated that it depends on what is called hemorrhage. When I stated my percentage I meant those requiring no treatment. Of course, you get some immediately after operation that an ice bag will control, and I did not list those as hemorrhage. I appreciate the discussions.

Mississippi State Medical Association

ORGANIZED 1867

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EDITORIALS

FROM OUR PRESIDENT

TO THE MEMBERS OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION—

My dear Doctors:

I have just had a meeting of the chairmen of the various sections of the Mississippi State Medical Association. We have practically completed the program for the Association. After going over the program carefully with the chairman of each section, I am offering this advance information in regard to the program, in order that you may make your plans now to attend this meeting. After many years of experience in dealing with the activities of the Association, I can truthfully say that I have never seen a more outstanding program, than will be presented to the profession of Mississippi at their meeting in Meridian, May 11-13, inclusive.

If you have not already done so, please write our friend, Doctor I. W. Cooper, at Meridian, and give him your requirements for hotel reservations, and he will see that your requests are granted. I have just been in correspondence with him as well as with the Lamar Hotel, and they have both assured me that there will be ample hotel accomodations for the membership, as well as necessary assembly halls for the Association. I would insist that you write Doctor Cooper immediately for your reservations if you have not already done so.

In addition to being the president of the Mississippi State Medical Association, I am also the president of the Mississippi State Pediatric Society. Since I am largely responsible for the program of this meeting, I am also advising you in advance, that we are having one of the best meetings and the most outstanding talent for this meeting, that it has ever been my privilege to see.

The Mississippi State Pediatric Society will meet on the afternoon and night of Monday, May 10, which is the day before the general Medical Section of Mississippi State Medical Association. I have invited the following outstanding pediatricians, and they have already accepted a place on this program for the State Pediatric Society: Drs. Joseph Brennemann and Paul Hollinger, both of Chicago; Dr. Edward Clay Mitchell, Professor of Pediatrics, University of Tennessee; Dr. Robert Strong, Professor of Pediatrics, Tulane University; Dr. Lawrence R. DeBuys, President, American Academy of Pediatrics; Dr. Horton Casparis, professor of Pediatrics, Vanderbilt University.

I now extend a most cordial invitation to the entire medical profession of this state to attend this meeting of the Mississippi State Pediatric Society, the afternoon and night of May 10th. The subjects to be discussed by these outstanding pediatricians will be of tremendous interest to every doctor in Mississippi. I would appreciate very much your writing me a note or card just to tell me that you will be present at this meeting and at the banquet, on Monday evening, May 10th.

Sincerely yours,
Harvey F. Garrison, president,
Mississippi State Medical Ass'n

Jackson, Feb. 4, 1937.

THE MERIDIAN MEETING

After nine years, the Mississippi State Medical Association returns to Meridian for its annual meeting this year on May, 11, 12 and 13. An outstanding program is promised by our president, Dr. Harvey F. Garrison, after consultation with the chairmen of sections.

Meeting in conjunction with the Medical Association Monday, May 10, are the Mississippi State Hospital Association, all day and evening, and the Mississippi State Pediatric Association, afternoon and evening. Both of these organizations should bring many doctors to Meridian early. Mississippi hospitals are essentially doctors' hospitals and the majority of Mississippi doctors are also interested in the diseases of children.

Meridian is an ideal convention city. We are assured that there will be no advance of hotel rates. Financial conditions are definitely on the up-grade. Every doctor of Mississippi owes it to himself and to his patients to be in attendance this year.

Better make reservations now.

MISSISSIPPI DOCTORS

A valuable roster of Mississippi physicians has recently been prepared by the Mississippi State Board of Health. All physicians are listed by counties and addresses are given. In the list are 1410 names. Of these 1355 are white and 55 colored (3.9 per cent). The last census (1930) shows the population of Mississippi to be 2,009,821. This would give one doctor to 1420 people in the state. Twenty-five of the 82 counties have one or more colored physicians.

The number of physicians by counties is as follows:

County	White Physicians	Colored Physicians	Total
Adams	20	4	24
Alcorn	17	0	17
Amite	10	0	10
Attala	13	0	13
Benton	5	0	5
Bolivar	38	2	40
Calhoun	13	0	13
Carroll	9	0	9
Chickasaw	16	1	17
Choctaw	7	0	7
Claiborne	7	2	9
Clarke	13	0	13
Clay	13	2	15
Covington	7	0	7
Copiah	17	0	17
Coahoma	30	1	31
DeSoto	12	0	12
Forrest	29	2	31
Franklin	7	0	7
George	5	0	5
Greene	3	0	3
Grenada	11	1	12
Hancock	9	0	9
Holmes	21	1	22
Harrison	49	3	52
Hinds	109	5	114
Humphreys	11	0	11
Issaquena	2	0	2
Itawamba	9	0	9
Jackson	11	0	11
Jasper	10	0	10
Jefferson	4	0	4
Jefferson Davis	7	0	7
Jones	34	3	37
Kemper	11	0	11
Lafayette	16	1	17
Lamar	6	0	6
Lawrence	6	0	6
Lauderdale	53	5	58
Leake	18	0	18
Lee	38	1	39
Leflore	40	2	42
Lincoln	15	1	16
Lowndes	22	2	24
Madison	15	2	17
Marion	12	1	13
Marshall	11	1	12
Monroe	24	1	25
Montgomery	9	0	9
Neshoba	12	0	12
Newton	20	0	20
Noxubee	10	0	10
Oktibbeha	11	0	11
Panola	16	0	16
Pearl River	12	0	12
Pike	25	0	25
Perry	5	0	5
Pontotoc	13	0	13
Prentiss	12	0	12
Quitman	16	0	16
Rankin	16	0	16
Scott	10	0	10
Sharkey	13	0	13
Smith	9	0	9
Simpson	19	0	19
Stone	5	0	5
Sunflower	28	1	29
Tallahatchie	21	0	21
Tate	11	0	11
Tippah	9	0	9
Tishomingo	10	0	10
Tunica	10	0	10
Union	15	0	15
Warren	39	4	43
Walthall	6	0	6
Washington	34	4	38
Wayne	8	0	8
Webster	11	0	11
Wilkinson	6	0	6
Winston	13	0	13
Yalobusha	13	0	13
Yazoo	21	2	23
Totals	1,355	55	1,410

STATE AID IN THE HOSPITAL CARE OF THE INDIGENT SICK

After seven months since the acts of the legislature of 1936 providing for the care of charity patients in community hospitals went into effect, it is well to consider what has been accomplished and the future possibilities of the laws. The plan was new and there were no precedents to follow. The State Hospital Commission, to which was delegated the duty of carrying out the provisions of the laws, could not go to another state and secure information as to how to proceed. The Commission, which serves without pay, has labored long and faithfully and it is believed has a workable set-up which not only brings efficient care to those in need but is helping hospitals and physicians of the state in the improvement of hospital methods and treatment.

The plan is being watched throughout the country as a possible solution to the problem of the hospital care of charity patients, a problem in every state. At the last meeting of the Mississippi State Hospital Association, Dr. Bert W. Caldwell, executive secretary of the American Hospital Association, said:

"I want to take this opportunity to pay deserved tribute to the great governor of your state, and the able men and women in your state legislature, who assisted you in passing this bill. From their generous hearts they have contributed more to humanity in Mississippi in a better way and at less cost than they have ever done in any single act which your legislature has taken.

"They have bestowed upon the voluntary and community hospitals of this state reimbursements for 70,000 hospital days each year at a fair average figure, these days to be devoted to the hospitalization of the sick poor. The money which the governor and the legislature have so generously provided for this purpose will reimburse your institutions for services which they would have had to perform in part and up to the limit of their financial resources, with no financial return."

Last year it is understood that Louisiana was considering similar laws, and it is reported that the legislature of Alabama has a bill before it patterned after the Mississippi laws.

At the recent sectional meeting of the American College of Surgeons at Atlanta, Dr. Malcolf T. MacEachern, associate director, in speaking of the work of the State Hospital Commission of Mississippi, stated, " If we can copy Mississippi in other states, we shall do something well worth while." A field representative of the College had recently visited the state and reported his findings.

There is much work still to be done. A financial statement for the first six and one-half months is given below. It will be noted that some counties have overrun their allotments, a few have not used their allotments. Counties in which there are state charity hospitals have been zoned to those hospitals and patients are required to go to those hospitals so that no charges are shown. A few other counties have also been zoned and patients from these counties are required to go to certain specified hospitals as follows: Calhoun County to Houston Hospital; Choctaw County to Oktibbeha Hospital; Lafayette County to the Bramlett and Oxford Hospitals; Union County to the Mayes and New Albany Hospitals; Webster County to Houston Hospital.

Patients from counties not zoned have the privilege of going to any hospital of their choice provided it has been approved for their care by the Commission.

Of course, the law provides for hospital care of indigent patients only. Inasmuch as all patients must have a doctor's certificate, a grave responsibility rests on the medical profession of Mississippi to see to it that the funds are expended for those in real need. If a patient able to pay for hospital care is certified as charity, it deprives the deserving poor of a place in the hospital, for the funds are limited. It is realized that strict judgment of eligibility to charity care is not always easy. It should also be realized that all certificates are permanent state records and are open to investigation.

The honest cooperation of doctors, hospitals, and boards of trustees are absolutely necessary to the success of the plan which seems likely to put Mississippi in a place of leadership throughout the country.

STATE HOSPITAL COMMISSION STATEMENT—JULY 1, 1936 TO JANUARY 15, 1937—6½ MONTHS

County	Amount Available	Hospital Charges
Adams	$1,675.92	$ 0
Alcorn	1,561.75	1,612.50
Amite	1,301.56	1,465.00
Attala	1,718.85	152.50
Benton	647.92	320.00
Bolivar	4,730.50	3,547.50
Calhoun	1,203.79	1,677.50
Carroll	1,305.07	967.50
Chickasaw	1,375.72	1,180.00
Choctaw	774.71	1,205.00
Claiborne	802.42	0
Clarke	1,299.34	0
Clay	1,183.97	105.00
Coahoma	3,058.96	1,032.50
Copiah	2,087.42	165.00
Covington	992.29	180.00
DeSoto	1,679.66	0
Forrest	1,988.48	55.00
Franklin	810.03	12.50
George	496.73	0
Greene	742.84	0
Grenada	1,109.42	1,285.00
Hancock	753.74	60.00
Harrison	2,914.73	0
Hinds	5,620.35	0
Holmes	2,544.42	1,260.00
Humphreys	1,634.36	610.00
Issaquena	378.62	392.50
Ittawamba	1,205.16	425.00
Jackson	1,074.69	785.00
Jasper	1,230.38	117.50
Jefferson	943.50	0
Jeff Davis	942.95	905.00
Jones	2,739.68	0
Kemper	1,444.82	1,352.50
Lafayette	1,318.27	1,860.00
Lamar	848.31	687.50
Lauderdale	3,482.96	0

Lawrence	[illegible]23.42	327.50
Leake	1,439.62	0
Lee	2,331.74	1,010.00
Leflore	3,533.01	961.00
Lincoln	1,740.37	2,245.00
Lowndes	1,980.03	660.00
Madison	2,363.59	0
Marion	1,315.73	790.00
Marshall	1,642.29	740.00
Monroe	2,386.24	990.00
Montgomery	991.55	885.00
Neshoba	1,762.41	17.50
Newton	1,512.74	1,040.00
Noxubee	1,687.72	1,727.50
Oktibbeha	1,262.43	1,287.00
Panola	1,891.63	1,160.00
Pearl River	1,281.34	1,097.50
Perry	541.25	0
Pike	2,131.21	1,410.00
Pontotoc	1.454.89	1,567.50
Prentiss	1,272.44	1,097.50
Quitman	1,670.82	165.00
Rankin	1,344.13	0
Scott	1,380.92	167.50
Sharkey	916.30	445.00
Simpson	1,379.82	1,272.50
Smith	1,205.30	165.00
Stone	376.61	117.50
Sunflower	4,206.54	2,885.00
Tallahatchie	2,349.58	2,372.50
Tate	1,166.81	460.00
Tippah	1,222.01	727.50
Tishomingo	1,084.61	532.50
Tunica	1,401.98	10.00
Union	1,404.32	1,552.50
Walthall	915.91	637.50
Warren	2,362.94	0
Washington	3,586.11	3,590.00
Wayne	1,010.00	10.00
Webster	800.80	1,322.50
Wilkinson	921.57	855.00
Winston	1,402.44	505.00
Yalobusha	1,172.01	2,012.50
Yazoo	2,459.35	482.50

"INTERESTING STATISTICS"

According to the authoritative League of Insurance Physicians of Germany, there were 30,559 insurance physicians employed in the Third Reich in a report under date of July 1, 1936. In 1933 there had been 32,620 physicians so employed. Thus there was a decrease of 2,061 doctors, despite the fact that in the same period the number insured was increased by about two million persons. According to the National Bureau of Statistics, the administrative personnel of the sick insurance societies numbered 35,636 persons in 1934, and 36,229 persons in 1935. With an increase in the total number of insured of nearly a million, since 1924 the lay personnel seems to have been increased about 10,000, *but the physicians to handle this larger number were reduced by about two thousand.*

This bears out our contention, repeatedly made, that for almost every doctor employed in compulsory health insurance, one or more laymen are employed. The Berlin letter (Berlin Letter, J. A. M. A., 108218, 1937) in our J. A. M. A., throws interesting light on this and other questions. It should be studied by all of us.—*New York State Journal of Medicine,* 37:, 1937, p. 312.

AMERICAN COLLEGE OF SURGEONS

A sectional meeting of the American College of Surgeons for the states of Alabama, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, and Tennessee, was held at the Atlanta Biltmore Hotel, Atlanta, Georgia, February 3, 4, and 5. General and specialty clinics at the numerous Atlanta hospitals were presented daily. Scientific meetings devoted to general surgery, eye, ear, nose, and throat, and fractures were held at the hotel. At a business meeting of fellows on the opening day, state executive committees for each of the states represented were elected. For Mississippi, the executive committee is Dr. C. C. Hightower, Hattiesburg, chairman; Dr. J. Gould Gardner, Columbia, secretary; and Dr. Walter W. Crawford, Hattiesburg, counselor.

A hospital conference coincident with the sectional meeting throughout the three days was attended by hospital representatives from eight states. Many hospital problems were discussed.

Other features of the meeting included the showing of many scientific motion picture films, a community health meeting open to the public, technical and scientific exhibits.

The meeting was well prepared and conducted by Dr. Malcolf T. MacEachern, Chicago, associate director of the American College of Surgeons, and was of special value to the surgeons and hospital people.

THE NEW NURSING SCHOOL CURRICULUM

In the Quarterly Bulletin of the New Jersey Hospital Association, Vol. III, No. 2, January, 1937, is a page and a half devoted to "The New Nursing School Curriculum," which is being revised by a committee of the National League of Nursing Education. "A Curriculum Guide for Nursing Schools" first appeared in book form in 1917. It was extensively revised in 1937. Now it is again "being brought up-to-date."

Among the reasons given for revision are "Because the Grading Committee's findings revealed that the majority of nursing schools in the country are mediocre schools and that there is no need for more graduate nurses with mediocre training and background," and "Because the increasing tempo and complexity of modern life and the new scientific discoveries, especially in medicine, which are constantly revolutionizing our ideas and procedures, place increasing demands—personal and professional—upon nurses."

Among the major recommendations are the following:

"1. That schools advance their admission standards as soon as possible to one to two years of acceptable educational work beyond high school.

"2. That as a matter of economy as well as of sound educational procedure students select their students carefully basing their decision, among other things, on the results of special mental and aptitude tests.

"3. That the professional program covers a period of two and one-half to three calendar years.

"4. That the daily number of hours for class and practice work not exceed 8; that the weekly number of hours not exceed 48, and be reduced to 44 as soon as possible; that with study hours added, the average day of the student (for 6 days weekly) be 10 hours, exclusive of rest, meals and recreation; and that 4 weeks be devoted to vacation in each year of the two and one-half to three year program

It is suggested that "probably the main cost to the hospital will be for providing nursing service to take the place of the students who, under the plan, will give fewer hours to work in the wards (8 hours in ward and classroom)."

As for resources, "the main source of income for schools of nursing comes through hospital channels in the form of credit for services to the hospital by student nurses. No commonly accepted basis for estimating the value of student service has yet been worked out. When students work their way through college, however, four hours of work per day is considered full payment for maintenance, including room and board.

"Some schools charge tuition fees. They range from $25.00 to $325.00."

MALARIA CONTROL

Malaria deaths in Mississippi decreased in 1936.

The deaths for the past four years have been as follows:

	Year	Jan. 1 to Sept. 30
1933	695	400
1934	647	478
1935	518	406
1936	——	248

Malaria Diagnosis:

An attempt has been made to increase the use of the laboratory in making diagnoses of malaria. During the past seven years, the State Board of Health has furnished physicians slide mailing outfits for sending in blood smears to the laboratory. The demand by physicians for these outfits for the collection and mailing of blood smears has increased. Great improvement has been made in confirming the accuracy of malaria diagnoses. This is evidenced by the fact that the number of slides examined by the State Hygienic Laboratory continues to increase yearly. The number of slides examined in county and private laboratories likewise has increased.

The State Hygienic Laboratory during the past six years has examined about 94,000 slides as follows:

Year	Number of slides
1931	5,597
1932	6,288
1933	9,870
1934	19,627
1935	22,524
1936	29,881

This improvement in the better diagnoses of malaria is also shown by the increase in the percentage of ante-mortem blood diagnoses in deaths ascribed to malaria.

This increase is shown by the following tabulation:

	No. Deaths Ascribed to Malaria			No. Deaths Confirmed by Ante-Mortem Diagnoses			Percentage Confirmed by Ante-Mortem Diagnoses
Year	White	Colored	Total	White	Colored	Total	
1929	121	195	316	18	11	29	9.2
1930	96	185	281	26	21	47	16.7
1931	82	129	211	22	31	53	25.1
1932	108	216	324	31	30	61	18.8
1933	275	420	695	68	86	154	22.2
1934	262	385	647	90	97	187	28.9
1935	228	290	518	77	85	162	31.3
1936			Report not complete for this year.				

The increased use of the laboratory has resulted in a more specific diagnosis as to the type of infecting parasite. As pointed out by Dr. Meleney in his presidential address before the American Society of Tropical Medicine, a definite knowledge as to the type of parasite is a most important factor in the intelligent treatment of malaria, and especially if the infecting parasite is *Plasmodium falciparum* (aestivo-autumnal). Probably ninety per cent of the deaths due to malaria are caused by this parasite. It is the belief of most investigators that *Plasmodium vivax* (tertian) and *Plasmodium malariae* (quartan) very rarely, if ever, cause death in uncomplicated infections. Of the 162 deaths that were confirmed by antemortem blood diagnoses in 1935, 84 or 51.9 per cent were not typed, while 78 or 48.1 per cent had the causative parasite specifically identified.

The Division of Malaria Control has furnished more than 20,000 of the slide mailing outfits to physicians. These outfits consist of the slide, data slip, and addressed Manila card wrapper. They are not bulky and are easily carried in the bag. These outfits will be furnished to physicians upon request.

Mr. Carl L. Duaine has been appointed as District Supervisor of Malaria Control with hearquarters at Greenwood. Mr. Duaine takes the place of Mr. Charles M. Brock who resigned to accept a better position.

DIRECTORY AND CALENDAR OF MEDICAL SOCIETIES

Information is not complete. Secretaries of societies are urged to send in full data so that it may be known when the societies of the state meet; also the names of the officers directing their activities this year should be known.

Mississippi State Medical Association: 70th Annual Session and Thirty-fourth Annual Session of the House of Delegates, Meridian, May 11, 12, and 13, 1937.

Adams County Medical Society: A. R. Perry, Natchez, president; F. S. Dixon, Natchez, secretary. Meets third Tuesday, each month; Natchez, 7:30 p. m.

Amite County Medical Society: W. R. Stewart, Osyka, president. D. H. Thornhill, Crosby, secretary. Meets with Wilkinson County Medical Society, Centerville.

Central Medical Society: L. W. Long, Jackson, president; Gayden Ward, Jackson, secretary. Meets first Tuesday, each month, Robert E. Lee Hotel Roof, Jackson, 7:00 p. m., except July and August.

Claiborne County Medical Society: E. P. Jones, Hermanville, president; G. W. Acker, Port Gibson, secretary.

Clarksdale and Six Counties Medical Society: J. E. Powell, Charleston, president; N. C. Knight, Clarksdale, secretary. Meets fourth Wednesday of March and second Wednesday of November, Elks Club, Clarksdale, 2 p. m.

Clark-Wayne Counties Medical Society: W. P. Gray, Waynesboro, president; Albert Hand, Shubuta, secretary.

Coahoma County Medical Society: I. W. Barrett, Clarksdale, president; N. C. Knight, Clarksdale, secretary. Meets second Wednesday each month, Clarksdale Hospital, Clarksdale, 1:30 p. m.

Delta Medical Society: J. M. Wright, Hernando, president; L. L. Minor, Rt. 4, Memphis, secretary. Meets first Monday of January, April, July, October, Hernando, 10 a. m.

East Mississippi Medical Society: T. G. Cleveland, Meridian, president; Bob A. Cameron, Meridian, secretary. Next meeting, March 11, Meridian.

Franklin County Medical Society: L. Costley, Meadville, secretary.

Hancock County Medical Society: A. P. Smith, Bay St. Louis, secretary.

Homochitto Valley Medical Society: Harrison Butler, Liberty, president; H. A. Whittington, Natchez, secretary. Meets January, April, July and October, 2 p. m.

Issaquena-Sharkey-Warren Counties Medical Society: G. C. Jarratt, Vicksburg, president; Leon S. Lippincott, Vicksburg, secretary. Meets second Tuesday, each month, Mississippi State Charity Hospital, Vicksburg.

Jackson County Medical Society: W. J. Weatherford, Pascagoula, president; R. G. Lander, Pascagoula, secretary. Meets second Thursday of March, June, September, Pascagoula, 7 p. m.

Jefferson County Medical Society: W. T. Harper, Fayette, secretary.

Newton County Medical Society: V. L. Henton, Decatur, president; Dudley Stennis, Newton, secretary. Next meeting, second Thursday in March, Decatur, 2:30 p. m.

North Mississippi Medical Society: R. G. Grant, Holly Springs, president; A. H. Little, Oxford, secretary.

Northeast Mississippi Thirteen Counties Medical Society: L. L. McDougal, Booneville, president; A. J. Stacy, Tupelo, secretary. Meets third Tuesday, March, June, September and December. Next meeting Booneville, March 16.

Pike County Medical Society: J. L. Bauer, McComb, president; Elise Rutledge, McComb, secretary. Meets first Thursday, each month, McComb, 6:30 p. m.

Pontotoc County Medical Society: L. O. Carruth, Tupelo, R.F.D., president; O. F. Carr, Pontotoc, secretary. Meets first Tuesday, each month, Pontotoc.

South Mississippi Medical Society: J. P. Culpepper, Hattiesburg, president; Carlton Temple, Hattiesburg, secretary.

Stone County Medical Society: Earl W. Green, Wiggins, secretary. Meets with Harrison-Stone-Hancock Counties Medical Society.

Tate County Medical Society: W. D. Smith, Senatobia, president; J. Sidney Eason, Coldwater, secretary. Meets second Wednesday, each month, Senatobia.

Tri-County Medical Society: D. T. Langston, New Hebron, president; R. B. Zeller, Hazlehurst, secretary. Meets March 9 Copiah-Lincoln Junior College, Wesson; June 8, Walthal Hotel, Tylertown; September 14, Riverside Hotel, Monticello; December 14, Whitworth College, Brookhaven, 12:30 p. m.

*Wilkinson County Medical Society*s E. M. Butler, Centreville, secretary. Meets with Amite County Medical Society, Centreville.

Winona District Medical Society: P. B. Brumby, Lexington, secretary.

MISSISSIPPI HOSPITALS—CALENDAR OF STAFF MEETINGS

MISSISSIPPI STATE HOSPITAL ASS'N.

Eighth Annual Session, Meridian, May 10, 1937.

Anderson Infirmary, Meridian Second Friday, each month 6:00 p. m.

Biloxi Hospital: First Friday, each month, 7:30 p. m.

Bramlett Hospital, Oxford: Third Wednesday each month, 7:30 p. m.

Clarksdale Hospital: Second Wednesday, each month, 1:30 p. m.

George C. Hixon Memorial Hospital: First Monday, each month.

Gilmore Sanitarium, Amory: Third Thursday, 7:30 p. m.

Greenwood-Leflore Hospital: First Thursday, each month, 7:30 p. m.

Houston Hospital: Last Thursday, each month.

Jackson County Hospital: Second Thursday, each month except July and August, 7 p. m.

Jackson Infirmary: Last Tuesday, each month, 4 p. m.

Mayes Hospital, New Albany: First Monday, each month.

Meridian Sanitarium: Second Thursday, each month, 6:30 p. m.

Mississippi Baptist Hospital: Third Tuesday, each month, 6:30 p. m.

Natchez Sanatorium: Second Tuesday, each month, 7:30 p. m.

Northeast Mississippi Hospital: First Monday, each month, 7:30 p. m.

Rush's Infirmary: Second Thursday, each month, 7 p. m.

South Mississippi Infirmary: Last Thursday, each month, 5 p. m.

U. S. Veterans' Hospital, Gulfport: Every Monday, Tuesday, Wednesday and Thursday, 10:45 a. m.

Vicksburg Hospital: Second Thursday, each month, 7 p. m.

Vicksburg Infirmary: First Wednesday, each month, 7 p. m.

Vicksburg Sanitarium: Tenth or week of tenth each month, 6:30 p. m.

Winona Infirmary: First Thursday, each month, 7:30 p. m.

STATE BOARD OF HEALTH

The Division of Vital Statistics has sent out an urgent appeal to all doctors, hospitals, undertakers, and registrars to give full information on the death certificate with reference to any accidental or violent death. The blank spaces on the death certificate for this special information are found on the right and at the bottom of the death certificate blank and refer especially to the following items:

1. Accidental? Suicidal? Homicidal?
2. Date of injury including day and hour.
3. Place of injury, and if a motor vehicle death, the county and distance and direction from some town should be stated.

The Vital Statistics Division desires to make a special study of accidental and violent deaths and this information on the death certificate is indispensable to such a study. Usually between 1,500 and 2,000 deaths occur yearly in Mississippi from violent and accidental means, and with such a large number of deaths from these causes, specific information is very essential for tabulation.

In a conference held in Hancock County, January 15, Dr. A. L. Gray, supervisor, Epidemiological Unit, discussed the findings in this county regarding epidemiological investigations. Dr. Underwood and Dr. Milne were present for the discussion.

Miss Donna Pearce, R. N., Regional Public Health Nursing Consultant, U. S. Public Health Service, New Orleans, La., was a recent visitor to the State Board of Health and to several of the full-time county health departments. Miss Pearce was observing the nursing service in this state. Interviews were held with Miss Mary D. Osborne, supervisor of Child Hygiene and Public Health Nursing, and Miss Ora Phillips, advisory nurse with the Field Unit.

The Mississippi State Board of Health has at the present time five sanitation supervisors taking a three month's course for sanitarians at the School of Engineering, Vanderbilt University. Further training of personnel is contributing to the advancement of public health in Mississippi. The emphasis on high grade, technically trained public health workers is an outstanding development of the last decade.

Jones County began full-time health service January 1. The staff is composed of Dr. A. R. Perry, director, Mrs. Estelle M. Dinkins, R. N., staff nurse, Miss Josephine Porter, dental hygienist, and Miss Margaret Wells, clerk. This makes a total of twenty-eight full-time county health departments in this state.

Eva Moore Adams, supervisor of health education, talked to the Philadelphia Culture Club, January 6, about, "A Parent's Responsibility for Children's Health."

Dr. Underwood addressed the State Veterinary Association in Tupelo, January 28, on "Your Responsibility in the Protection of Public Health."

Miss Carolina R. Randolph of the Commonwealth Fund, New York City, was a visitor in the Pike County Health Department for a time in January.

Dr. Harry E. Handley of the Commonwealth Fund, New York City, spent several days at the State Board of Health making an appraisal of activities carried on by the Field Unit during 1936. He was especially interested in the activities in Jones County where a full-time health department was organized January 1, of this year.

Dr. Emma Gay, commander, Women's Field Army, American Society for the Control of Cancer, called a meeting in Jackson, January 23, of the Federation of Women's Clubs for a stimulating talk on this subject placing special emphasis on the morbidity and mortality of cancer.

The following nurses were granted scholarships at Vanderbilt University, Nashville, Tennessee, beginning January 1,: Mrs. Edna Edwards, R. N., Laurel; Mrs. Newry C. Thompson, R. N., Poplarville; Miss Ruby Dell Young, R. N., Hattiesburg; Miss Thelma Welch, R. N., Oxford.

Returning from universities where they have had four and one-half months' scholarships are: Miss Bessie Bornman, R. N., Meridian, Columbia University; Mrs. Edith Gleason, R. N., Oxford, Columbia University; Mrs. Mary Alice Gilliam, R. N., Lexington, Vanderbilt; Miss Selma Rhodes, R. N., McComb, Vanderbilt; Mrs. Verna Clark, R. N., Vicksburg, Vanderbilt.

Mr. J. E. Johnston, sanitation supervisor, Field Unit, has returned from Yale where for the past four months he studied the latest principles and practices in public health administration.

Dr. Underwood and Dr. Ricks attended the Regional Conference of Health Officers of the Fourth District in Memphis, January 18. Health officers from most of the Southern states were present.

The Malaria Control Division was visited in January by Mr. Frederick W. Knipe, malaria control engineer of the Rockefeller Foundation staff in Albania. Mr. Knipe came to inspect the malaria program in Mississippi.

Col. LePrince, director of Sanitary Engineering of the U. S. Public Health Service, after inspections of anti-anopheles mosquito control measures in Mississippi reported to the surgeon general that malaria control work in this state would probably become a future standard for measures in large areas of the country.

Dr. J. W. Dugger, director of Industrial Hygiene and Factory Inspection, has just completed a series of physical examinations for the 481 employers and employees of the N and W. Overall Factory in Jackson. This examination consisted of a chemical and microscopical urinalysis, taking of blood pressure, examination of the eyes, ears, nose, throat, chest, and heart, and Wassermann and malaria tests. A complete tabulation will be made of the results of these examinations. The work in this factory and subsequent activities in other factories is only one phase of the industrial hygiene program conducted in the state.

Jackson, FELIX J. UNDERWOOD,
February 5, 1937 Executive Officer

AMITE COUNTY MEDICAL SOCIETY and WILKINSON COUNTY MEDICAL SOCIETY

The Amite County Medical Society met in joint session with the Wilkinson County Medical Society, at Field Memorial Hospital, Centreville. Amite County re-elected Dr. W. R. Stewart, Osyka, president, and Dr. D. H. Thornhill, Crosby, secretary. An excellent dinner was served under the direction of Miss Mabel Richardson, directress of nurses at Field Memorial Hospital. A round table discussion was held as regards recent cases, of local interest. Personal ideas as regards the best methods of treatment for intestinal parasites from the standpoint of end results and cures were presented by different members.

Reactions from the administration of quinine to sensitive patients were discussed by experienced practitioners. We were warned in giving quinine intravenously to do so with care as severe reactions are met with even in patients who show no special sensitivity to the drug by mouth.

Of course, we all like a good speaker but if you fail to obtain one just start the "Bull" to rolling and doctors will start talking about their experiences. If you sift the results down and filter it you will always leave the meeting with some good ideas that the other fellow has probably learned through bitter experience. We all enjoy our occasional experience meetings.

Amite Wilkinson County Societies will continue to hold joint meetings through the year. Both are very small societies and by meeting together, attendance is better assured. As many of us as possible hope to attend the medical meeting in New Orleans in March and the State Medical at Meridian in May. We hope to see old friends at both.

Crosby, D. H. THORNHILL,
February 5, 1937. Secretary.

CENTRAL MEDICAL SOCIETY

A regular monthly meeting of the Central Medical Society was held in the convention hall of the Robert E. Lee Hotel, Jackson, February 2, at 6:30 p. m.

The scientific program included:

1. Diagnosis, Treatment and Prognosis of Coronary Occlusion.—Dr. H. L. Smith, Department of Cardiology, Mayo Clinic.
2. Case Report—Epidemic Meningococcic Meningitis.—Dr. H. F. Garrison, Jr.
3. Case Report—Typhus Fever.—Dr. J. W. Lipscomb, Jr.
4. Case Report—Carinoma of Penis—Dr. Cecil Walley.

The Membership Committee reported 154 paid up memberships for 1937.

Jackson, GAYDEN WARD,
January 29, 1937. Secretary.

COAHOMA COUNTY MEDICAL SOCIETY and CLARKSDALE HOSPITAL MEDICAL STAFF

The Coahoma County Medical Society and the Clarksdale Hospital Medical Staff met in the dining room of the Alcazar Hotel at 12 o'clock Wednesday, February 10. In the absence of the regular secretary, Dr. E. L. Wilkins served as secretary.

Immediately after lunch the president, Dr. I. W. Barrett, ordered the minutes read. They were approved as read.

There being no further business to discuss the scientific session was immediately entered into as follows:

Placenta Praevia.—T. C. Hughes, Clarksdale, discussed by Slack, Levy, Robinson, Pierce; closed by T. C. Hughes.

Dr. E. L. Wilkins to read a paper for the March meeting and W. S. Slaughter agreed to read one for the April meeting.

There being no further business the Society adjourned.

Clarksdale, N. C. KNIGHT,
February 12, 1937. Secretary.

DESOTO COUNTY

At a recent meeting of the DeSoto County Medical Society, the following were elected to serve the ensuing year:— President, Dr. J. M. Wright, Hernando; vice-president, Dr. H. M. Wadsworth, Hernando; secretary-treasurer-editor, Dr. L. L. Minor, Rt. 4, Memphis, Tenn.; delegate and alternate, Drs. A. L. Emerson, and J. M. Wright, respectively; censors, Drs. D. C. Funderburke, A. V. Richmond and J. A. Rhodes.

On the program for the April meeting are Drs. C. W. Emerson, H. M. Wadsworth and J. M. Wright. Guests at this meeting are Rev. W. L. Robinson, Hon. Gerald Chatham and Miss Ora Strychland, the genial secretary for Dr. Wadsworth in whose office we hold our meetings.

It is not news to say that during these days of high water and anxiety, the doctors are unselfishly giving their time and means to those in need.

It is a well known fact that medical science has brought many beneficial blessings to mankind. The elimination and control of the infectious and contagious diseases; sanitary measures of various and sundry kinds and by these means and others have added years to the average duration of life.

We should encourage the Woman's Auxiliary to our State Association. Mrs. C. M. Murray, Ripley, is the councilor of the second district. The wife of a member is eligible to membership on the payment of one dollar.

We agree with the idea advanced by Dr. F. M. Acree, secretary of the Delta Medical Society, that the secretaries of the various component societies should have a luncheon with a round table discussion of the problems that confront the local secretary on whose shoulders fall most of the work and perplexity.

The time is well spent in re-reading "Alcoholic Beverages as Factors in Automobile Accidents," by Dr. Seale Harris of Birmingham, Ala., in the December issue of *The Mississippi Doctor*. Anything that Dr. Harris says or writes is worthwhile, this article in particular.

There is only one retired physician in this county, Dr. W. B. Maxwell, Nesbit; the good doctor retired a number of years ago. He is now quite old and in the sunset of his life he has the love of his family and friends.

Rt. 4, Memphis, Tenn., L. L. MINOR,
Feb. 9, 1937. County Editor.

HOMOCHITTO VALLEY MEDICAL SOCIETY

The Homochitto Valley Medical Society held its quarterly meeting, January 14, in Natchez and the following officers were elected:

President—Dr. Harrison Butler, Amite County.

Vice-President—Dr. W. T. Thornhill, Amite County.

Vice-President—Dr. Edwin Benoist, Adams County.

Vice-President—Dr. C. E. Mullins, Franklin County.

Vice-President—Dr. R. B. Harper, Jefferson County.

Vice-President—Dr. Chas. Catchings, Wilkinson County.

Secretary-Treasurer—Dr. H. A. Whittington, Adams County.

Clinical cases were presented by Dr. Hickerson. Dr. Oscar Bethea gave us an address on "Empyema of the Lung."

Natchez, LUCIEN S. GAUDET,
February 4, 1937. County Editor.

ISSAQUENA-SHARKEY-WARREN COUNTIES MEDICAL SOCIETY

A regular monthly meeting of the Issaquena-Sharkey-Warren Counties Medical Society was held at the Mississippi State Charity Hospital, Vicksburg, Tuesday, February, 9, and after a supper, served at 7:30 p. m., was called to order by the president, Dr. G. C. Jarratt, with fifteen members and three guests present.

Paper and Discussions: Orthopedics—Dr. W. E. Johnston, chairman.

1. Disability of the Knee Joint.—Dr. Thomas H. Blake, Jackson.

Discussed by Drs. W. E. Johnston and A. Street. Dr. Blake closed.

3. Case Report—Gunshot Wound in Chest.—Dr. N. B. Lewis.

It was then announced that by action of the Executive Committee and letter vote of the members, the Society had voted to cooperate as a unit with the Red Cross and other agencies to furnish medical care in a flood emergency. It was planned to hold sick call as necessary, treat refugees for special diseases in the offices of members, aid in vaccination as necessary, care for patients in emergency hospitals and perform similar services.

The members of the Society were to be assigned to duty in rotation.

The secretary was elected to serve as director and contact man.

The secretary's report for the year of 1936 showed membership as follows: Issaquena County 3; Sharkey County 7; Warren County 27; Warren County, life members 2; honorary members 2; total 42, a gain of two members over 1935.

Eleven regular meetings were held. The total attendance was 213 members and 102 guests, an average attendance of 19 members and 9 guests.

Papers were presented by 22 members and 14 guests.

The average attendance of members at meetings for the year was 48.1 per cent of the total membership.

Reports of the out-patient clinic operated under the direction of the Society for the month of January showed:

Total number of patients in clinic	509
Daily average,	16
Total number of patients in clinic on clinic days	407
Daily average,	24

It was reported that a representative of the American College of Surgeons had recently inspected the hospital and commented favorably upon the work that is being done. Repairs and improvement are being made through the W. P. A.

Dr. F. M. Smith announced that Dr. W. D. Hickerson of the Mississippi State Sanatorium would hold diagnostic clinic during the first week in March and physicians were invited to refer patients for examination.

Dr. Blake announced the meeting of the Central Medical Society in Jackson on March 2, at which the program would be given by outstanding men from Vanderbilt University School of Medicine.

The next meeting of the Society will be March 9. It will be devoted to eye, ear, nose, and throat and the committee in charge is Drs. H. H. Johnston, chairman, E. H. Jones, C. G. Edwards, Alston Callahan.

HUMPHREYS COUNTY

Mrs. H. F. Jones, Belzoni, has returned home after spending a month in New York with her son, Dr. James Taylor, and his wife. Dr. Taylor's work in psychiatry has merited a high degree of distinction as evidenced by his being recently selected to occupy a very responsible position.

Dr. and Mrs. J. W. Barkley and children have moved to Nashville, Tenn. Dr. Barkley has been awarded a scholarship providing three months' study in public health work at Vanderbilt University.

Mr. Fred Crider, Bradford, Tenn., has been visiting his brother-in-law and sister, Dr. and Mrs. J. W. Jackson.

Dr. Ira B. Bright, Greenwood, was a recent visitor in Belzoni. We would be glad to see more of Dr. Bright.

Dr. and Mrs. J. R. Jackson were visitors at Jackson recently.

Mrs. J. C. Higdon, Sr., is ill of influenza.

Dr. John C. Bell has been appointed local railroad surgeon to succeed the late Dr. J. C. Higdon.

Belzoni, J. W. JACKSON,
Feb. 4, 1937. County Editor.

LAFAYETTE COUNTY

Dr. B. S. Guyton, Oxford, has announced the association of Dr. E. W. Green, formerly staff member of the Hurst Eye, Ear, Nose, and Throat Hospital of Longview, Texas.

Oxford, February 1, 1937.

LEFLORE COUNTY

Dr. and Mrs. L. H. Hightower, Itta Bena, had as their guests, January 1, their son, Dr. J. R. Hightower, Chattanooga, Miss Frances Heidler, Mt. Vernon, Ill., and Dr. Garvin Davenport, Transylvania College.

Dr. Ruth Dean returned January 4, from a ten days' visit to relatives in Madison County.

At a regular meeting of the staff of the Greenwood Leflore hospital, Thursday night, January 7, a nice turkey dinner was served by Miss Trigg and the nurses of the hospital.

A representative of the American College of Surgeons visited our hospital, on his inspection trip, January 12.

Dr. S. L. Brister, Jr., addressed the N. W. District Nurses Association, Greenwood, January 14, on "Allergy."

Dr. J. C. Adams, Greenwood, attended the meeting of the American Eye, Ear, Nose, and Throat Society at Memphis, January 15.

Dr. W. M. Duke, Sunny Side, this county, entered the Methodist Hospital, Memphis, for treatment January 17.

Dr. George Baskervill, Greenwood, went to Norfolk, Va., January 20, to visit his sister, returning January 28.

Dr. T. B. Holloman, Thornton, was a visitor to Greenwood January 27. He formerly lived at Itta Bena.

Dr. L. B. Otken, Greenwood, has been appointed by Dr. H. C. Ricks, of the State Board of Health, to serve as chief of medical relief for flood refugees in Greenwood.

Dr. W. E. Denman is very much improved at State Sanatorium, and is expecting to return soon.

Dr. I. B. Bright is in bed with an infected hand, and Dr. R. B. Yates is also out of commission with a sacro-iliac arthritis and sciatica.

Greenwood, W. B. DICKINS,
February 3, 1937. County Editor.

MARION COUNTY

It might be of interest to the members of the Mississippi Medical Association to know that the Columbia Clinic Hospital has rearranged its hospital staff with the addition of new members and we hope to do even better service by this movement.

Dr. J. G. Gardner left this morning to attend a medical meeting in Atlanta, Ga.

Dr. J. C. Conner has returned to Columbia and is much improved after surgical treatment at the Mayo Clinic.

Columbia, D. A. RATLIFF,
Feb. 2, 1937. County Editor.

TIPPAH COUNTY

Dr. R. M. Adams and wife and Mrs. Virginia Carnal have been to Raymond, to attend the marriage of Mr. Herman Adams to Miss Mary Gillespie, of that place, the 9th. Mr. Adams is the son of Dr. and Mrs. Adams and has been practicing law in Raymond for a few months.

Mrs. T. L. Randolph spent much of January in the hospital in Memphis, but is now at home much improved.

The necessary postponement of the Mid-South Assembly due next week in Memphis, is a disappointment to our doctors who have attended these meetings, but we can look toward next year when plans will be made again.

Weather conditions were such that it was not possible for any of our members to attend the district meeting at Water Valley, and here's hoping we will be permitted to make the next meeting.

We have had but few refugees in this county and we have not heard of any infectious diseases having been brought.

Ripley, C. M. MURRY,
February 10, 1937. County Editor.

WARREN COUNTY

Dr. Alston Callahan admits that he had always though Manhattan was an Indian chief, a brother to Powhattan, that the Bronx referred to a boxing ring, and Holland's Tunnel was a small hole in the ground that you crawled through to get from one place to another when crowded, until he spent last week plying around in little old New York City.

Dr. Guy C. Jarratt, during the second week in February, attended at Jackson, a meeting of noted pediatricians. We have evidence for suspecting they are endeavoring to perfect a "Nursery Yell" for the kiddies to supplant the whoop in whooping cough, and deter the abnormal growth of the tonsils.

We are advised that the young ladies down at 2521 Drummond Street, Vicksburg, had worn out two radios in the past year, twisting the dial to find some music-makers playing, "Moon Over Miami" until last week Dr. George Street and Mrs. Street took the girls down into Florida to show them that they had no better moon there for all purposes than we have right here in Vicksburg.

The American College of Surgeons held its recent meeting in Atlanta, Georgia. The profession of Vicksburg and Warren County was most creditably represented there by Dr. Leon S. Lippincott and our own Jack Parsons. He is called "Jack", not that he is a "Jack" of all trades, for he is wedded to surgery, not that he is a "Jumping Jack," as he is quite well possessed and retains his poise admirably until Edley Jones gets behind with about twenty-five case reports that should be presented at the monthly staff meeting. Perhaps he is called "Jack" because he represents such a "Croesus of Wealth,"—Monetary, Generosity, Intellectuality, etc.

Two of our erudite specialists, Dr. W. K. Purks, and Pierre Robert are not very much in sympathy with the work of some of our noted veterinarians, who claims that "dystemper" in the horse and dog are similar, if not indentical with "influenza" in man. Dr. Purks and Robert are making an uneventful recovery from "flu."

As we pen these words we look from our windows out on the mighty Mississippi, and she is mightier than she has been in many days. Ten years ago, a little later in the spring, we, in another city, met with men, who were planning for the impending overflow of that year. The attitude there was apprehension, fear, dread of an approaching and certain disaster that would be most injurious to persons and material things. In the meetings here in Vicksburg, we note no such tension. They are business meetings, planning how we can do our part to clothe, feed, shelter, and protect from disease a possible multitude if the levees should break. No feeling of impending disaster to the citizens of this city, although many offers of help, many words of sympathy from the far corners of our great country have come to us in our supposed hour of inundation and devasting overflowing waters that have submerged our fair city, all of which we sincerely appreciate as an expression of human sympathy. Nevertheless, Vicksburg sits unperturbed on her seven hills far above the turbulent floods of the Mississippi that madly rush by at her feet. However, should the time ever come when the overflow waters of the Mississippi find egress to the Gulf of Mexico, through the Rio Grande on the west side, and the "Georgia Crackers" on the east side take flight to the top of Stone Mountain to keep their feet dry from the rising waters of the Mighty Mississippi, then and only then, will Vicksburg become apprehensive of personal safety from the unbridled waters of Old Man River.

Vicksurg, H. T. IMS,
February 15, 1937. County Editor.

WASHINGTON COUNTY

We are glad to inform the many friends of Dr. T. B. Lewis that he is expected to recover fully from the hip fracture which he sustained at Jackson during the December holidays. He is now at home after a short period under observation at the King's Daughters Hospital, Greenville.

Mrs. T. C. Oliver, wife of Dr. T. C. Oliver, Leland, underwent an elective operation at the King's Daughters Hospital during January. She has returned to her home and her recovery is said to be satisfactory.

Dr. and Mrs. W. P. Shackelford, Hollandale, were painfully injured in an automobile accident January 6. Just south of Leland on Highway No. 61 they collided with an automobile driven by a negro. Mrs. Shackelford was slightly cut and painfully bruised. Dr. Shackelford received severe contusions of the chest from which he has recovered after several days treatment at the hospital in Greenville.

Dr. Shackelford's accident made it necessary for his associate, Dr. S. L. Lane, to return from New Orleans where he has been taking post-graduate work in the Tulane Graduate School of Medicine. His course was not completed but he expects to resume his studies at the next term of the Graduate School, by which time it is expected that Dr. Shackelford will be able to resume his practice.

Dr. D. C. Montgomery attended the meeting of the Southern Division of the Triological Society held in Memphis January 13 and 14.

Dr. H. A. Gamble and Dr. J. A. Beals, Greenville, attended a meeting of the Garland County Medical Association at Hot Springs, Ark., January 14. Dr. Gamble was the guest speaker of the program. He addressed the association on his open wound method for the treatment of peritonitis.. The address was illustrated by motion pictures in natural color.

Dr. Chas. Berry, Greenville, was called to Tupelo January 5, to attend funerals of an aunt and uncle, both of whom were coincidently deceased on the same day.

Mrs. J. B. Hirsch, wife of Dr. Hirsch, Greenville, visited relatives in Memphis during January.

Dr. L. C. Davis, Greenville, visited friends in Jackson, where he enjoyed a short vacation and a hunting trip.

Mrs. D. C. Montgomery, Greenville, visited friends in Memphis for a few days this month.

Dr. and Mrs. J. A. Beals, Greenville, had the pleasure of a few weeks' visit from Dr. Beals' mother, Mrs. Dora Beals, who lives at Westfield, Ind. During her stay in Greenville she was entertained at a tea given by Mrs. R. E. Wilson, wife of Dr. Wilson.

Dr. Paul Gamble took his wife and two children, Paul and Mary, aged 5 and 6, to Palm Beach, Fla., during the latter part of January. Dr. Gamble will return within a few days to his practice in Greenville. Mrs. Gamble will remain in Palm Beach for several weeks. The children are recovering from an unusually severe attack of chicken pox and it is hoped their stay in sunny Florida will hasten their return to health.

Greenville, J. A. BEALS,
Feb. 5, 1937. County Editor

WINSTON COUNTY

The doctors of the county are busy. Flu is getting more prevalent.

The writer had a thrill the 31st ult. delivering three girls to the wife L. D. Miller, (colored). The girls named Minnie, Linnie, and Winnie, were born at 3, 3:15, and 3:30 p.m.

Dr. H. B. Wadkins, county health officer, was in the city this week on business.

Dr. T. C. Suttle of Betheden and Dr. E. Lovorn of Fearn Springs were on the streets this week.

Having been previously appointed as assistant county health officer by Dr. H. B. Wadkins, the mayor and board of aldermen of the city elected the writer as city health officer which I reluctantly accepted, as the work ahead is very unpleasant.

We are informed that Dr. C. A. Kirk and Dr. E. L. Richardson are going to take a six weeks' review course at Tulane soon.

Louisville, M. L. MONTGOMERY,
February 9, 1937. County Editor.

HOSPITAL STAFF TRANSACTIONS

BRAMLETT HOSPITAL STAFF MEETING

At the staff meeting of the Bramlett Hospital, Jan. 19, the following were present: Drs. E. S. Bramlett, E. V. Bramlett, H. T. Gondorf, J. R. Simms, C. S. Wilkins, S. O Price, W. W. Phillips.

At the last meeting (Dec. 18, 1936) a definite time of meeting was set as the third Wednesday of each month at 7:30 p. m., a paper to be read at each meeting by some member of the staff.

Minutes of the last meeting were read and adopted without alteration.

Recent cases of mutual interest were discussed:

(1) Cyst of Broad Ligament.

(2) Tumor of Trapezius-Apparently of Neurogenous Origin.

(3) Epidermal Carcinoma of Cervix.

Following this Dr. Gondorf gave a general discussion of the above cases.

Dr. J. R. Simms presented a paper with photographs and x-ray pictures of "Osteogenic Sarcoma."

The meeting adjourned at 9:30 p. m. to convene again in February.

E. VENABLE BRAMLETT,
Secretary

Oxford
Jan. 23, 1937

MAYES HOSPITAL

The Mayes Hospital holds its regular monthly staff meetings on the first Monday of each month, H. N. Mayes, president, and E. Hayes Wesson, secretary,

We are all happy professionally.

H. N. MAYES

New Albany,
Feb. 3, 1937.

VICKSBURG SANITARIUM STAFF MEETING

A regular monthly meeting of the staff of the Vicksburg Sanitarium was held Wednesday, February 10, and after a supper served at 6:30 p.m., was called to order by the vice-president, Dr. L. J. Clark, with eleven members and one guest present. The program included:

Reports from the Records Department and Analysis of the Work of the Hospital.

Report of Vital Statistics.—Dr. F. Michael Smith, director, Warren County Health Department.

Special Case Reports:

1. Carcinoma of the Fundus of the Uterus.—Dr. A. Street.
2. Nutritional Edema and Allergic Eczema.—Dr. G. C. Jarratt, (Read by Dr. L. J. Clark.) Discussed by Dr. A. Street and L. J. Clark.
3. Toxemia of Pregnancy, Pre-eclamptic, with Cardiac Decompensation.—Dr. R. A. Street, Jr.

Discussed by Dr. L. J. Clark.

Demonstration of Selected Radiographic Studies: Subdeltoid Bursitis; Pulmonary Tuberculosis (3 cases); Cholelithiasis.

Three-Minute Reports of the Literature of the Month:

1. Dr. L. S. Lippincott—The Friedman Test for Pregnancy.
2. Dr. L. J. Clark—Coronary Occlusion as a More Preferable Diagnosis Than Chronic

Myocarditis.

3. Dr. H. H. Johnston—Masked Nasal Sinusitis as a Cause of Undiagnosed Fever.

4. Dr. W. E. Johnston—Demonstration of Electric Stethoscope.

The next meeting of the staff will be held Wednesday, March 10, 1937.

ABSTRACT: NUTRITIONAL EDEMA AND ALLERGIC ECZEMA

G. C. Jarratt, M.D.

Patient.—White, male, age 13 months.

Chief Complaint.—Swelling of the body and rash on face and forehead.

Present Illness.—Mother states that the child had been on numerous types of artificial feedings up until five months of age, at which time developed an eczema of the entire body and was taken off of all forms of milk fed on strained vegetables for three months. The eczema had not improved, so taken off of all food except orange juice, water, and creamed Irish potatoes. Thus for the past five months, the infant had only received potatoes, water and orange juice. There had been no improvement in the eczema since starting this diet.

About three weeks ago, they noted a beginning swelling on the legs and feet and thighs and eyelids, and this had grown progressively worse, until practically the whole body was swollen.

Past History.—Pneumonia at four months of age; no immunization or contagion.

Birth History.—Normal cephalic delivery; weight, 7½ pounds.

Feeding History.—Breast for two weeks, then condensed miik for two months; then evaporated milk for three weeks; then cow's milk with equal parts of water and no added sugar for two months; then protein milk with no added sugar for three weeks. Strained vegetables from five months of age to eight months of age only. No cod liver oil, but orange juice since six weeks of age.

Physical Examination.— Fairly well-developed, but poorly nourished emaciated infant. Ears, eyes, nose, and mouth normal. Heart and lungs normal. No enlargement of the spleen or liver. Genitalia, extremities, and central nervous system essentially normal. A dry scaly, eczema on both cheeks, nose, forehead, and extending on to the scalp. Isolated areas of dry eczematous rash over the arms and forearms, but no other parts of the body. Swelling of upper and lower eyelids of both eyes, of chest wall, back abdomen, arm, forearm, hands, thighs, legs and feet, this swelling pitting on pressure.

Clinical Laboratory.—Two specimens of urine were normal. Blood Wassermann, Kahn and Kline and Young tests were negative, likewise agglutination of test for undulant fever. Blood: hemoglobin 62 per cent; reds 4,100,000; whites 22,400; lymphocytes 54 per cent; polys 43 per cent, and eosinophils 3 per cent. Blood urea nitrogen was 13.08 milligrams, creatinin 1.3 milligrams, and plasma proteins were fibrin 0.13 per cent, albumin 3.68 per cent, globulin 2.84 per cent, or a total of 6.65 per cent.

Procedure.—A diagnosis of nutritional edema, allergic eczema and nutritional anemia was made. The infant was put on a normal diet, consisting of whole boiled cow's milk, strained vegetables, vegetable soup, egg yolk, cereal, orange juice, and cod liver oil. For the eczema, a plain naftalin ointment was used. The child was in the hospital for three days and, even at the end of three days, there was a marked improvement in the edema and the infant was eating and taking his food nicely and seemed happy and not hungry as he had for the past several months. There was no aggravation of the eczema with the giving of the above foods. The infant was discharged home with instructions to continue the treatment as above outlined and I have heard from him in the past week and the mother states he has very little of the eczema and that all edema is gone and he has gained 2½ pounds in the month and is a different child in every respect.

ABSTRACT: TOXEMIA OF PREGNANCY, PRE-ECLAMPTIC, WITH CARDIAC DECOMPENSATION

R. A. Street, Jr., M.D.

Patient.—Colored, female, age 28, married, admitted to the Sanitarium, January 1, complaining of marked dyspnea, and marked edema of extremities.

Present Illness.—Last menstrual period began July 3, 1936. Pregnancy was uneventful up until two weeks ago, except for slight dyspnea on exertion, which has become increasingly more severe and has been very marked for the past week. Unable to rest at night, even with several pillows under the head. Dypsnea became very acute today and patient was very uncomfortable, even when sitting up, at time of admission. No history of headache or noticeable charge in the urinary output. Appetite had been fair; no vomiting; no visual disturbances noted; no abdominal pains noted.

Past History.—Normal pregnancies in 1926 and 1928, with no symptoms of toxemia. Premature still birth in 1932 at 7 months. Considerable nausea during pregnancy and it was noted that the fetal movements ceased two days before the still birth was expelled. No dyspnea or edema was noted during this time, however. Had second still birth in 1935 at about 8 months gestation; considerable nausea during this pregnancy, and had moderate dyspnea one month before the onset of the premature labor, with marked edema of ankles. There has been no dyspnea and only slight edema of ankles following this pregnancy. She has noted nocturia varying from two to three times a night for the past 1½ years. Aside from being overweight for the past two years, the history is not remarkable.

Family History.—Mother had similar toxemia with last two children.

Physical Examinations In acute distress, with very rapid shallow respirations. Tem. 98.6 degrees F; pulse 140; resp. 30; blood pressure 260/160. Pulse weak, rapid and irregular. Marked edema of both lower extremities and, also, some edema of the hands and generalized edema over the body. Pelvic examination confirmed diagnosis of pregnancy of about 5½ months duration. Reflexes very active.

Clinical Laboratory.—Urine contained 1/30 of 1 per cent albumin (by weight), rare hyaline and granular casts. Blood count was not remarkable; no anemia.

Procedure.—Patient immediately hospitalized and given 30 minims of digitalone every six hours in the muscle, 1 ounce of epsom salts by mouth daily and put on liquids. Urinary output was very good during the first 24 hours and edema subsided rapidly, but the blood pressure remained about the same as on admission. The next day digitalis was cut from 30 minims intramuscularly to 10 minims by mouth, every six hours. Patient was very much more comfortable, pulse rate being about 80 to 90 and of good quality. Given 250 cc. of 20 per cent glucose solution in the vein. Improvement continued and urinary output was fairly good. January 4, she was taken to surgery and the membranes were ruptured without difficulty and a No. 24F. catheter was inserted into the lower uterine cavity and wide gauze packing was put in the vagina. Given 200 cc. of 20 per cent glucose solution that night and general condition remained about the same, with no pains noted that day. The next evening she began to complain of pain in the lower abdomen, but at regular intervals, and also complained of some headache and nausea. She was again given 250 cc. of 20 per cent glucose solution in the vein and at 12:30 a.m. January 6, patient expelled catheter, packing, and fetus and placents. Usual postpartum care was given, with 1cc. of intramuscular pituitrin immediately following the expelling of fetus and placenta and one ergotrate tablet every four hours for six doses. Headache and nausea subsided following the delivery. Patient continued to improve and had good results from bowels and kidneys. She was put on soft diet on the seventh and was discharged on the tenth. Blood pressure at this time was very high, being 260/140.

Subsequent.—Seen in the clinic January 26, at which time general condition seemed satisfactory; not complaining of any headache, nausea, vomiting, or physical disturbances. Blood pressure at this time, was 240/140. Again seen February 4 and had continued to feel well and blood pressure was 180/130. Examination of the fundi at this time did not disclose any evidence of retinal hemorrhage or separation of the retinae. Urine entirely free of albumin, no casts were found, and otherwise not remarkable. Patient was advised against future pregnancies.

HONOR ROLL

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Societies: Amite County and Wilkinson, County, D. H. Thornhill; Central, Gayden Ward; Coahoma County, N. C Knight; Homochitto Valley, Lucien S. Gaudet; Issaquena-Sharkey-Warren Counties.—6.

Hospitals: Bramlett, E. V. Bramlett; Mayes, H. N. Mayes; Vicksburg Sanitarium.—3.

Others: Harvey F. Garrison Felix J. Underwood.—2.

Totals: 20.

Thank you.

WOMAN'S AUXILIARY
TO THE
MISSISSIPPI STATE MEDICAL ASSOCIATION

MEDICAL AUXILIARY HOLDS CHARMING TEA IN ADNA WILDE HOME

The Woman's Auxiliary to the Central Medical Society was hostess at a charming informal tea in the Adna G. Wilde home, 1700 St.Ann, on Tuesday afternoon honoring the wives of doctors visiting in the city as guests of the medical society.

,A short business session presided over by the president, Mrs. Temple Ainsworth, was followed by tea served from a beautifully appointed table in the dining room. Pink carnations and fern in a low crystal bowl centered the table, which was draped with lace.

Official hostesses for the tea were: Mrs. Wilde, Mrs. H. C. Sheffield, chairman in charge of arrangements for the affair; Mrs. Harvey F. Garrison, Sr., Mrs. F. E. Rehfeld,Mrs. J. P. Wall, Mrs. Joseph F. Armstrong and Mrs. Robert McLean.

Assisting hostesses were: Mrs. J. O. Segura, Mrs. Carter O'Ferrall, Mrs. J. A. Milne, Mrs. T. E. Wilson, Mrs. F. L. Van Alstine, Mrs.Lawrence Long and Mrs. Frank Hagaman.

Among the out-of-town guests were Mrs. J. E. Wallington of Florence; Mrs. W. C. Poole of Cary, a past president of the state auxiliary to the medical society; Mrs. S. L. Knight of Mendenhall; Mrs. H. E. Frizell of Vaughan; Mrs. R. B. Wilson of Carthage; Mrs. Lacey Biles of Sumner; Mrs. Lawrence Long Sr., of Satartia; Mrs. J. S. Harter of Sanatorium; and Mrs. Stuart.

Members of the Jackson Auxiliary in addition to the hostesses who attended were: Mrs. Harvey F. Garrison, Sr., Mrs. W. F. Hand, Mrs. Fred Hollowell, Mrs. Robin Harris, Mrs. C. F. McKenzie, Mrs. J. E. McDill, Mrs. H. F. Magee, Mrs. George W. Owens, Mrs. George W. Riley, Mrs. Felix Underwood, Mrs. N. C. Domack, Mrs. Brister Ware, Mrs. John Walker, Mrs. J. W. Barksdale, Mrs. Toxey Hall, Mrs. O. F. Carr, Mrs. J. W. Lipscomb, and Mrs.N. F. Kendall.

The ladies of the Northeast Mississippi Thirteen County Medical Auxiliary are urged to accompany their husbands next Tuesday, March 16, for the quarterly meeting which convenes in Booneville. Mrs. B. D. Hansel, of Okolona, the new president, has plans which she wishes to discuss.

The wives of Booneville physicians will be hostesses to all attending guests at the home of Mrs. W. H. Anderson the afternoon of the meeting.

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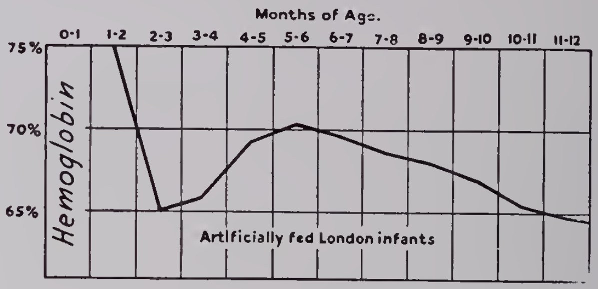

The accompanying chart of the hemoglobin level in the blood of infants is based on more than 1,000 clinical cases studied by Mackay. The sharp drop in hemoglobin during the early months of life has also been reported by a number of other authorities. It is noteworthy that this fall in hemoglobin has been found to parallel closely that of diminishing iron reserve in the infant's liver. The usual milk formula of infants in early life further contributes to this anemia because milk is notably low in iron. It is now possible, however, to increase significantly the iron intake of bottle-fed infants from birth by feeding Dextri-Maltose With Vitamin B in the milk formula. After the third month Pablum as the first solid food offers substantial amounts of iron for both breast- and bottle-fed babies

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[1-10] Bibliography on request.

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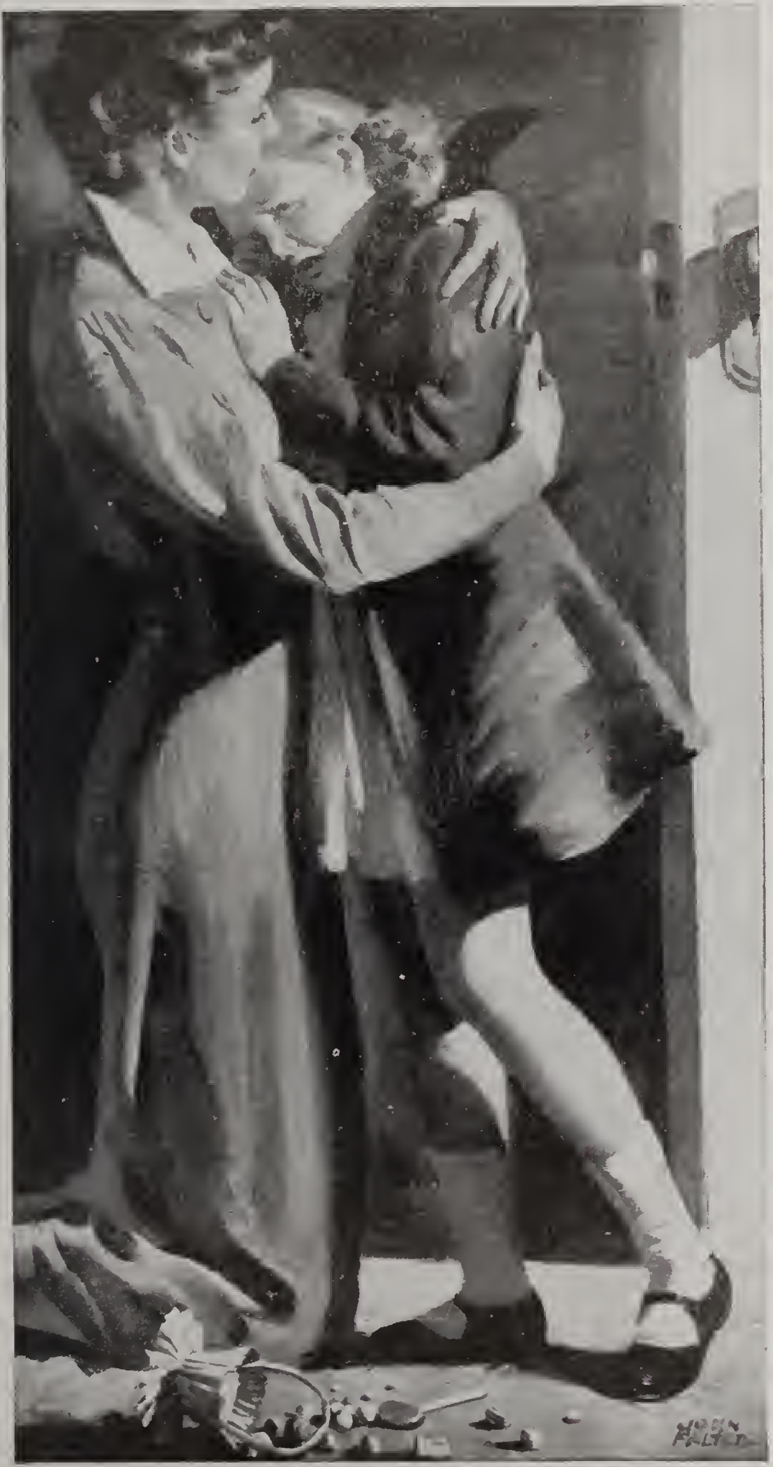

"BUT, dear, tell Mother—what *is* the matter?"

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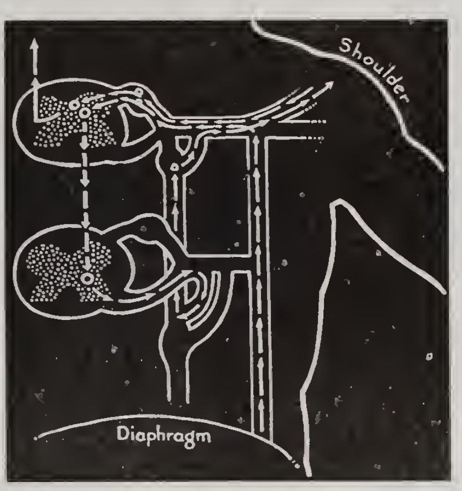

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Intestinal Obstruction*

By HARVEY B. STONE, M.D.
BALTIMORE, MD.

For many reasons the subject of intestinal obstruction is of compelling interest to all those engaged in general practice, consultative diagnosis, general surgery, and those surgical specialties that may affect the abdomen. Even more remote fields of medicine at times are concerned with it. The disorder is of fairly frequent occurrence and grave nature. It causes a mortality that is still alarmingly high; a mortality, indeed, that generally speaking shows no striking reduction over a period of many years. Numerous and various types of obstruction occur to which reference will be made later. A great deal of study and experimentation have been directed toward clarifying the underlying disturbances in functions and pathological developments that take place when bowel is occluded. It is worth while to summarize the more important results of this study here, as they have a practical bearing on the clinical aspects to be considered later.

As a result of the investigations of many students in many places the following conclusions have been drawn. Obstruction of the bowel lasting more than a few hours seriously disorders bodily chemistry, leading to loss of water, or dehydration, loss of acid (chlorine) irons, or alkalosis, and a mounting N. P. N. in the blood serum, or the threat of uremia. The increasing pressure within the gut from accumulating gas and fluid contents produces pressure anemia of the bowel wall with danger of perforation, and changes the absorptive and resisting properties of the bowel, so that poisonous substances may pass into and through it, thus laying open the way to general intoxication. The intensity of these processes increases directly with the time the obstruction is permitted to continue. Also these changes progress more rapidly in the higher bowel—the jejunum—than in the lower bowel—the colon. Obstructions of such a nature, for instance strangulated hernia, as directly to compress or occlude the larger blood vessels of the bowel are much more rapidly dangerous than those in which vascular impairment develops more gradually from the pressure within the lumen. The clear recognition of these factors in the pathological evolution of intestinal obstruction has led to the development of therapeutic measures aimed to combat them. A discussion of such measures will be found later in the course of this paper.

There are two general types of obstruction,—defective function of bowel motility and mechanical stoppage of the lumen. In the first group are several sub-divisions: failure of contractile power of the bowel wall, known as paralytic or adynamic ileus; excessive and unremitting contraction of bowel wall, spastic or dynamic ileus; and lesions specifically damaging the bowel wall preventing its proper function; mesenteric thrombosis and embolism, visceral angioneurotic edema and purpura. Many of these states result from extra abdominal or general conditions. Paralytic ileus may be associated with grave infections such as pneumonia, with lesions of the central nervous system; fractured skull or head operations; with extra peritoneal operations; prostate or kidney; or with many types of intra-abdominal operations. It is always a late sequel of neglected mechanical obstruction, the distended bowel finally becoming paralyzed, and marks a stage in the progress of mechanical obstruction that gravely endangers recovery. As will be emphasized later, the greatest opportunity for bettering our results in mechanical obstruction lies in relieving it before bowel paralysis takes place. Paralytic ileus itself is not a surgical disease. Operation of any sort, including enterostomy, rarely helps matters and often makes them worse. The problem is not that of an occluded bowel lumen but of failure of propulsive force in the bowel wall, and the trauma of any laparatomy increases the tendency to stasis. The treatment, besides proper attention to the general condition that may have instituted the ileus is the emptying of the colon so far as possible by repeated enemata, the emptying of the upper tract by stomach or duodenal tube with proper suction devices, the intravenous administration of adequate amounts of water, salt and glucose, the application of heat to the abdomen, and the use of the various drugs designed to provoke and stimulate peristalsis. These drugs are often unsatisfactory and undependable in their action and the entire regimen of treatment just outlined often fails of its purpose. Attempts to re-adjust nerve balance by the use of spinal anesthesia to check the inhibiting effects of the splanchnic nerves may be helpful at times, but are frequently disappointing. Under these conditions, with the patient steadily growing worse, there is a great tendency for the medical man to put increasing pressure on the surgeon to operate. If it is clear that there is no mechanical obstruction and that the case is purely one of paralytic ileus, the surgeon should resist this pressure for the good of the patient and for the good repute of himself and of surgery. Doing useless and ill-advised operations does not help a desperate situation.

---

*Prepared for the fifty-third annual meeting of the Mid-South Post-Graduate Medical Assembly, Feb. 16-19, 1937, Memphis, Tenn. Meeting canceled because of flood.

What is true of paralytic ileus is equally true of spastic or dynamic ileus,—it is not a surgical condition. The most common cause of this disorder is some intoxication, provoking intense, prolonged spasm of the bowel musculature of which the best known example is lead poisoning. This type of ileus is not common but when a patient presents symptoms of severe persistent colicky abdominal pain, without distention, vomiting or apparent mechanical obstruction, the possibility of spastic ileus of toxic origin should be thought of and investigated. Needless to say, the treatment should be directed at the causative intoxication and is not operative.

Systemic diseases that directly affect the bowel wall so as to impair or destroy its function constitute an interesting group. Osler laid frequent stress on the occurrence of visceral manifestations of such disorders as angioneurotic edema and purpura. A segment of intestine may become so swollen with edema or hemorrhage as to lose its contractibility for a time. As a rule, the diagnosis is established by finding of other evidences of the disease or of previous similar attacks. The blood count may be helpful in angioneurotic edema, showing an eosinophilia, or in purpura showing a thrombocytopenia. The treatment is that of the general disease. Only rarely does the bowel lesion reach a stage requiring surgery. On the other hand, infarction of the bowel from thrombosis or embolism of mesenteric vessels is a surgical condition. Prompt operation offers the only chance of recovery, as a rule, but this chance is generally not a good one. Often the extent of damage is very great, several feet of gut being involved, the operation is formidable, and usually the patient is in poor condition,—a bad heart being the usual cause of the embolism or thrombosis. Nevertheless, prompt and bold surgery has recorded triumphs even in this discouraging group of cases.

The second major type of intestinal obstruction is that in which there is a direct mechanical blocking of the lumen. This major classification of mechanical obstruction is divisible into sub-groups, acute and chronic, complete and incomplete, strangulating and non-strangulating, compressive and obturative, etc. The names are sufficiently descriptive to need no further elaboration. Very numerous groupings may be made also on the basis of actual mechanical derangement. Every text book gives the long list, adhesions and bands, volvulus, intussusception, strangulation hernia, tumors, etc, but there seems no need for detailed discussion of each of these local causes of mechanical obstruction. What is urgently needed is discussion and recognition of the general principles of handling such cases so that we may improve the results of treatment. It may be said, however, before leaving the matter of the sub-divisions of mechanical obstruction, that from the practical stand-point, the only difference between the chronic, the incomplete, or the so-called non-strangulating groups of cases and their opposite categories lies in the fact that the urgency of the need for help is not quite so pressing. Correction of the mechanical difficulty is still necessary but palliative and preliminary measures may safely be tried first. One should, of course, be very sure of the facts before deciding that such delay is permissible.

Acute mechanical obstruction is what most physicians have in mind when they use the unqualified term "obstruction". It is the most numerous group in the whole field, the most rapidly dangerous, the cause of the large mortality in statistical studies. In contrast to other types already discussed, its treatment is preeminently surgical. It is here that there is greatest opportunity for improvement in our results, because one may say with at least theoretical certainty that every case of acute mechanical obstruction could be saved if it were possible to recognize it and treat it early enough.

Something was said earlier about the aid in handling obstruction that has been given by the experimental investigations of the condition, and it has just been stated that treatment is preeminently surgical, and also that early recognition is of prime importance. All of these statements are true. It remains to present them in proper relation. The first essential to dealing with obstruction is to recognize it early and discriminate the type concerned. This is by no means always easy, but if we are to save more patients suffering from obstruction, we must succeed in doing it. The first step is to develop a state of mind that will raise the question of obstruction in every case having intermittent, colicky abdominal pain lasting more than four or five hours. It is true that many cases of food or chemical poisoning give violent crampy pains, as do certain virulent intestinal infections like acute dysentery, but nearly always they are accompanied by diarrhea. With obstruction, the reverse is, of course, true but there may be an evacuation of bowel contents below the point of obstruction in some cases shortly after onset. The most important clinical examination is auscultation of the abdomen. The hearing of gurgles, bubbling and rushing sounds coincident with the attacks of colicky pains is strongly suggestive of obstruction. These sounds change as the condition progresses. Deaver used to speak of the noisy abdomen of early obstruction, then the occasional tinkling and dripping sounds of later obstruction, and finally the silent abdomen of the paralyzed gut that has lost its contractility from great distention and that indicates advanced and deadly obstruction with paralytic ileus. A great aid in reaching diagnosis is x-ray examination. A plain film of the abdomen, taken in the erect position, will usually show much more gas in the small intestine than is normal, and often the ladder pattern made by gas and fluid levels in different loops of bowel. These findings are frequently definite within a very few hours after the onset of obstruction. Usually there is vomiting, even in the early stages of the trouble but this is not invariably true, as in a few cases this symptom may be delayed in appearance. This is particularly true if the location of the bowel stoppage is low, as in the colon. Distention is not general in the first few hours and may never be pronounced in very high obstruction. Visible peristalsis may or may not be detected. Tenderness, fever and leucocytosis are not characteristic of the early stages but generally do develop later in the process. The ideal time for recognition of the condition is before they have developed. The history of preceding laparotomy, of a hernia or of similar past attacks is of significance. To summarize, acute intermittent colicky pain, with audible peristaltic sounds, and x-ray findings of significance, perhaps with vomiting, visible peristalsis, distention, usually with failure of passage of gas or stool, is enough to make a presumptive diagnosis of acute mechanical obstruction. There are, of course, the usual exceptions and qualifications that have to be made to any clinical generalization, but with this admitted, the generalization is sound and backed by ample experience. In most instances, this picture develops with sufficient definiteness to be recognized within four to eight hours after onset, and that is precisely the time when its recognition is most important. A lengthy discussion of differential diagnosis could be developed, and while important, would unduly lengthen this paper. The early appearance of signs of inflammation,—fever, tenderness, rigidity, muscle spasm, leucocytosis,—in acute appendicitis, acute gall-bladder disease, perforated peptic ulcer, acute pancreatitis, etc., will usually distingush these conditions from simple obstruction, in which they appear only very much later. The differentiation between acute mechanical obstruction and paralytic ileus is highly important, for to repeat, the former requires operative treatment which is useless and harmful in the latter. As a rule, this differentiation can be made. The pain in mechanical obstruction comes early, is sharp, intermittent, colicky. In ileus there is general abdominal discomfort, tension, aching and often dull pain in the back and flanks, coming on later, more constant, and less severe. Mechanical obstruction causes audible and often noisy peristalsis; in ileus the abdomen is silent. The vomiting of obstruction is often violent, profuse and intermittent, in ileus it is more of a regurgitation, occurring later and after starting it is more or less constant. It must be admitted that in some instances one can not reach a definite conclusion, and where the probability of obstruction is great, action should be based on the assumption that this condition exists, rather than delaying too long in the hope of resolving all doubts as to the correct diagnosis.

This leads to consideration of the treatment of acute mechanical obstruction. It is helpful to think of treatment as directed at two purposes; the first the direct relief of the mechanical derangement, the second the combating of the various disturbances set up by that derangement. Both of these purposes are highly important but the first is basic and primary, the second accessory. Generally speaking, the relief of the obstruction implies abdominal operation. It is true that a strangulated hernia may at times be reduced by manipulation, and an intussusception by administration of an enema, but these special instances do not alter the rule that surgical correction of the obstruction is required. There is no need to discuss the technical steps needed to apply this rule in the great variety of conditions that may be met, but a word should be said about dealing with the gut when the obstruction has been cleared. If the objectives that have been stated above,—early diagnosis and prompt operation,—are secured, the condition of the gut will give little concern, but this ideal will never be completely attained in practice, and there will always be a number,—let us hope a decreasing number,—of instances in which the gut has been damaged before its release. The surgeon is then faced with a problem that calls for the exercise of his best experience and judgment. He may decide that the gut, though damaged, is still viable and do nothing but replace it in the abdomen. He may think that the injured segment requires removal, and then he must further decide whether the condition of the bowel and of the patient will permit a repair by anastomosis, or whether it is safer to bring out the severed ends of the bowel and establish an enterostomy. The survival of the patient may depend largely upon the wisdom and skill with which each of these issues is met.

The accessory measures of treatment of obstruction have been largely developed as a result of the experimental studies referred to at the beginning of this paper. It will be recalled that these studies showed that with obstruction there develop changes in the patient's general condition, such as dehydration and alkalosis and that the pressure within the obstructed gut causes serious local injury. To combat these effects, certain procedures have been widely adopted within recent years, making a great advance in the clinical treatment of obstruction. These procedures are the intravenous administration of water, salts and glucose, on the one hand, and the decompression of the bowel from above, on the other. It is true that the washing of the stomach by the ordinary stomach tube goes back many years but this is not quite the same thing as the present method of decompression. By the technique described by Wagensteen and others, a small nasal tube is passed into the stomach or duodenum and left in, with its outer end connected to a proper suction device. In this way the gas and fluid that distends the upper alimentary tract is systematically withdrawn. These two procedures, replacement of necessary substances and bowel decompression, have converted many seriously ill patients into much improved risks and undoubtedly saved many lives. It is a great mistake, however, to infer that they are a substitute for the surgical relief of the obstruction, and to lose valuable time, during which progressive damage to compressed or constricted bowel may be going on, in the hope that these measures may make operation unnecessary, is to transform most helpful therapeutic agencies into a menace. It may be true that in a limited group of cases, such as the early adhesive kinkings of the bowel that develop soon after abdominal operations, an obstruction may release itself with decompression through a nasal tube, but certainly even here only the most experienced should delay operation, the delay should be limited to a very short time and the patient should be most carefully watched with successive x-ray films of the abdomen, and the closest clinical observation. In general, the proper field of intravenous injections and alimentary decompression is that stated above,—most important accessories to the basic treatment of the prompt surgical relief of the obstruction. They should be started as soon as the diagnosis is made, as a preparation for the operation that is about to be done, and continued during and after that operation, as long as they may be needed. By the application of this plan of treatment, it may be confidently hoped that the outcome of acute mechanical obstruction will be made more hopeful in the future than it has been until now.

To summarize: Disorders causing failure of the bowel to propel its contents fall into two large groups, the loss of functional power of the bowel wall and mechanical blocking of the lumen. The first group, as a whole, embraces conditions that are not primarily suitable for surgical treatment, and of this group paralytic ileus is the most important example. The second group is a large and important one with various subdivisions, in which the primary principle of treatment is the early surgical relief of the obstruction. The administration of water, salts and glucose, by vein, and the decompression of the upper digestive tract by suitable apparatus are highly valuable accessory treatments. The early recognition of the nature of the illness is of fundamental importance and the diagnostic problem has been discussed. If early diagnosis is to be made, the public, the general profession and the surgeon should be made aware of the gravity of crampy abdominal pain persisting more than a few hours.

To give practical illustration of clinical application of the foregoing views, reference may be made to a series of personal cases studied by the writer and his associate, Dr. James C. Owings. This study covered all cases seen during a number of years, and while the total figures are small the facts they reveal we believe to be significant. During this time, twenty-seven cases of acute mechanical obstruction were operated upon, and no case was explored with such a diagnosis in which the lesion was not found. In other words, our enthusiasm for early diagnosis and prompt operation has not as yet led us astray into unnecessary operating. We realize that this misadventure may overtake us at any time and naturally make every effort to void it, but should we be persuaded that a case was one of obstruction, and find upon exploration that we were wrong, we would seek to learn the reason for our mistake in that particular instance, not to change the principles of treatment that we are convinced are sound. Of the twenty-seven cases, only two were lost, a mortality of slightly over 7.7 per cent. One of these, although counted as a death in our statistics, died of generalized tuberculosis, including tuberculous peritonitis, fifty-six days after operation, with relief of the obstruction and with a functioning bowel. The second case was an obstruction of the jejunum coming to operation on the sixth day after onset, in almost a moribund condition. This case was seen by the surgeon very late and was clearly lost by delay. Among the cases that recovered, four were operated upon within twelve hours of onset, the earliest being at seven and a half hours. The others were scattered over periods of fourteen hours to eleven days. The longer time intervals were in most instances found in patients with growths in the large bowel, where obstruction was less prompt in reaching completion and where the rule of less fulminant symptoms with low obstruction explains to some extent the dilatory attitude in seeking surgical assistance. Many of the cases, on the other hand, were due to adhesions and bands constricting loops of bowel and these usually caused abrupt and rapidly developing clinical pictures. In most of these patients the loop involved was in the lower three or four feet of the ileum. This experience has led us to a practical point in technique. Where acute obstruction develops in a patient who has had a previous laparotomy in the lower abdomen, we usually assume that a band of adhesions is probably responsible. A low right rectus incision is made and the ileocaecal valve sought for. If collapsed ileum is found it is traced upward to find the obstruction. This handling of collapsed gut in the search for the trouble is far easier for the surgeon and less shocking to the patient than the usual method of lifting out the first distended loop and tracing it downward. Another technical point, already well known, is that when obstruction results from a malignant tumor, it is wise to relieve the obstruction by a simple proximal enterostomy and deal with the growth at a later time. It is not, however, the purpose of this paper to elaborate questions of technique, but rather to concentrate on conceptions of the nature of obstruction, its effort, local and general, and the principles by which it should be treated. We submit our report of experience merely to support these general considerations. The mortality of 7.7 per cent rests on too small a statistical base to justify much emphasis, yet it is significantly lower than average reported results. We believe that with an alert profession and an educated public, early surgical treatment will give uniformly a mortality better than that heretofore recorded.

Surgery of the Stomach*

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Radical removal of the pyloric end of the stomach has been performed in the Vanderbilt University Hospital 45 times during the past 10 years; 16 times for malignant disease of the stomach and 29 times for benign conditions of the stomach or duodenum. Forty-three patients recovered successfully from the operation, so that in 45 consecutive operations of resection of the stomach there has been an operative mortality of 4.4 per cent. One patient who died was a man 46 years of age who had such an extensive carcinoma of the stomach that postoperative removal meant almost complete gastrectomy. The patient survived the operation but continued to lose ground and died on the fourth postoperative day. The other patient who died was a man 67 years of age who had an ulcer of the lesser curvature of the stomach. The stomach was resected according to the Billroth No.2 method. The patient's temperature rose abruptly on the third postoperative day and the patient died on the fifth postoperative day. Autopsy was performed and no satisfactory explanation for death could be found.

Eleven other patients have had postoperative complications. Two patients had mild attacks of postoperative pneumonia. Two patients had brief periods of massive atelectasis. Three patients required re-suture of the wound on the sixth, ninth and twenty-sixth days respectively. One patient vomited a sufficient amount of blood on the day of operation to require transfusion. One patient developed a mild pyelitis on the eighth day. One patient had retention in the stomach of an amount sufficient to require gastric lavage at intervals for three weeks after operation. One patient vomited for seven days after operation, and had a sufficient amount of obstruction at the gastrojejunostomy to require re-opening of the abdomen and jejuno-jejunostomy between the afferent and efferent loops.

Thirty-two cases had an entirely uneventful recovery. The average duration of stay in the hospital of all patients after operation was 19.8 days.

In all of these instances a relatively large amount of the stomach was removed; or, to put it another way, in most instances only a very small amount of stomach was left behind. In 32 cases the type of operation performed was Billroth No. 2, and in 13 cases the Polya operation was used. Although there is no demonstrable difference in the ultimate functional result obtained in these two operations, we are convinced that the best immediate results have occurred after the Billroth No. 2 type of operation. The only two patients in which any marked retention in the stump of the stomach occurred, had polya operations. In one of these patients the stomach stump began to empty spontaneously about three weeks after operation. The other patient required jejuno-jejunostomy between the afferent and efferent loops. This is the only patient in which this additional feature was present in the operation. In some of the European clinics this procedure is carried out as routine in all stomach resections.

As a further indication of the immediate functional results obtained by these two different techniques, 16 cases in which the patients have had Billroth No. 2 operations, and nine patients having the Polya operation were examined with the fluoroscope and opaque meal within the third week after operation. Only two patients having the Billroth No. 2 operation showed any considerable amount of retention, while four had very small five-hour retention. Of the nine patients having had the Polya operation, two had complete retention, two had marked five-hour retention, and one had slight retention.

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*Read before the Central Medical Society, Jackson, Miss., March 2, 1937.

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Another, and I believe quite as serious objection to the Polya procedure, is that it does not permit of the easy removal of so large an amount of the stomach, which is always necessary when dealing with benign ulceration high on the lesser curvature, and particularly with carcinoma. I am also convinced that the functional result is better after removal of a large portion of the stomach than if only a small part of the pyloric end is removed. Furthermore, I believe that there is less likelihood for the subsequent development of jejunal ulcer. So far no evidence of jejunal ulcer has occurred in any of the patients described in this paper.

Now as to the different conditions for which this operation was performed:

Carcinoma of Stomach

Resection of the stomach has been performed 16 times for carcinoma of the stomach. Fifteen of these patients were males; 12 were white and four colored; the ages varied from 36 to 69 years. Three patients were under 40 years of age and only three were over 60. The average age was 52 years. The symptoms were very much the same in all instances, the patients complaining of discomfort ranging in degree from vague epigastric discomfort to severe abdominal pain. In 10 of these cases there was definite palpable tumor, and in seven there was obvious pyloric obstruction. In 13 of the cases there was, on X-ray examination, a filling defect in the stomach which was considered characteristic of carcinoma. In two instances with complete pyloric obstruction, the stomach was too large to be filled with the opaque meal sufficiently to demonstrate a filling defect. In one instance, X-ray examination done outside was said to have shown nothing abnormal.

At operation, in 15 cases the disease was so far advanced that no hope was entertained for obtaining a permanent cure. These operations were all undertaken for the relief which might come from the removal of a large, infected, ulcerated tumor. In one instance the tumor was small and there was no demonstrable extension beyond the immediate site of the tumor. This tumor, however, was on the posterior wall and was adherent to the anterior surface of the pancreas.

Postoperative convalescence was uneventful in all but two of these cases. One died on the fourth postoperative day. Unfortunately, an autopsy could not be obtained, so that the cause of death was not determined. Another had a brief period of temperature elevation associated with massive atelectasis. These patients were discharged from the hospital on an average of 17 days after operation.

The results obtained were, briefly, as follows: One patient died in the hospital. Seven patients died within one year after discharge from the hospital. Four patients died between one and two years after operation. One patient died two and one-half years after operation. Three patients are still alive: one, two and one-half years; one, one and one-half years; and one, five months after operation.

Judged only by the duration of life after operation, these results would seemingly indicate that operation was hardly worth while; but if one considers the fact that all of these patients were at the time of operation suffering from pain, severe anemia and marked malnutrition, and that after operation there was relief of pain, cessation of vomiting and at least a brief period of satisfactory improvement, I believe that I would still feel that the operation was worth while even if none of the patients survived for more than a period of a few months. As a matter of fact, six of these patients have been remarkably well for approximately two years after operation, and one patient, whom I examined only a few days ago, was well and strong and without any manifestations of gastro-intestinal disease two and one-half years after extirpation of a large ulcerating tumor of the pyloric end of the stomach.

Penetrating Round Ulcer of the Lesser Curvature

Resection of the stomach was performed 12 times for the characteristic deep round ulcer with calloused base, situated on the lesser curvature. Seven of these ulcerations were at a considerable distance from the pyloric ring and five of the ulcerations were relatively near the pylorus. Nine of these patients were male and three female. All except two (who were 34 and 38 years old) were over 45 years of age, the oldest being 71 years of age. All were white except one colored female. All but three of these patients had had relatively severe symptoms referable to the stomach for more than four years. One patient had had symptoms for a year, and two others for only four months.

On X-ray examination, all of these patients showed a definite filling defect on the lesser curvature. In only two instances in which the ulcer was near the pylorus was there any evidence of obstruction.

The Billroth No. 2 type of operation was performed in 9 instances and the Polya in three instances.

For some unknown reason, most of the postoperative complications from resection of the stomach occurred in this group. One patient died on the fifth postoperative day. Autopsy failed to reveal the cause of death. Five patients had uneventful recovery. Three patients developed definite postoperative pneumonia. One patient required re-suture of the abdominal wound 26 days after operation. Two patients developed persistent vomiting after operation. In one of these cases there was apparently nothing which passed from the remaining stump of the stomach into the jejunum. In this case the abdomen was re-opened on the seventh day and a jejunostomy performed between the afferent and efferent loops. Following this operation the patient mad an uneventful recovery. In the other case of persistent vomiting it was necessary to do a daily gastric lavage for a period of three weeks after operation, at which time the gastro-jejunostomy began to function and the patient had no further difficulties.

In spite of these postoperative complications, 11 of these patients were discharged from the hospital after an average postoperative convalescence of 21 days. Seven of these patients are alive from two to ten years after operation. Four patients died between one and one-half and three and one-half years after operation. Two of these patients died of the characteristic signs and symptoms of coronary occlusion. The patient who died one and one-half years after operation was not suspected of having coronary disease. His death was extremely sudden after one and one-half years of complete relief of all gastro-intestinal symptoms. The other patient who died of coronary occlusion was known to be suffering from coronary disease at the time of operation, and it is an interesting fact that during the three and one-half years which he lived after operation he had many attacks of angina pectoris, but he frequently remarked that none of these attacks represented as severe suffering as he had previously experienced from the deep calloused ulcer on the lesser curvature of the stomach. Another patient who died one and one-half years after operation may have died of coronary occlusion. She was reported by her physician to have died of advanced arteriosclerosis. The fourth death which has occurred was three years after operation, when the patient returned to the hospital with an acute intestinal obstruction due to adhesions presumably occurring as the result of the previous operative interference. This patient was the one who was previously referred to as having to have the abdomen re-opened three weeks after operation and enteroenterostomy performed between the ascending and descending arm of the loop of jejunum sutured to the stump of the stomach. The patient was operated upon and found to have complete obstruction by a mass of cicatricial tissue at the site of the previous jejuno-jejunostomy. None of these patients suffered from any evidence of gastro-intestinal disease between the time of operation and death. Seven patients who are still living from two to ten years after operation consider themselves entirely free from any gastro-intestinal discomfort.

Syphilis of the Stomach

Resection of the pyloric end of the stomach has been performed in five patients with extensive ulceration of the stomach, which we believe was either due to syphilis or at least was profoundly influenced by this disease. The history of these patients is in sharp contrast with that of the patients suffering with deep, round ulceration of the lesser curvature, because of the relatively short duration of symptoms. All of the five patients with syphilis of the stomach had had symptoms referable to the stomach for periods of less than seven months. The Wassermann was positive in each instance. It is interesting to note that in two instances ulceration of the stomach developed during the period in which the patient was receiving intensive antisyphilitic treatment. In another instance, antisyphilitic treatment for a brief period seemed to have no influence upon the patient's symptoms. Two patients were operated upon before any treatment was administered. In one of these instances, treponema pallida were isolated in large numbers from the stomach wall and enlarged regional lymph nodes.

Preoperative X-ray examination in each of these cases showed unmistakable evidences of an extensive ulcerative process in the pyloric end of the stomach, strongly suggestive of cancer. Four patients had definite epigastric tumor.

The pathological changes encountered at operation in all of these cases were remarkably constant. In contrast to the carcinoma or the benign round ulcer, the entire pyloric end of the stomach showed evidences of a moderately acute inflammatory reaction, in two instances actually associated with a fibrinous exudate. Regional lymph nodes were greatly enlarged, soft, edematous. Instead of a single sharply defined ulcer, there were many large, irregular, shallow ulcerations. Only the extreme cardiac end of the stomach appeared normal.

The greater portion of the stomach was removed in each of these instances. In four cases the Billroth No. 2 method was employed and in one, the Polya.

Postoperative convalescence in all of these cases was uneventful. Discharge from the hospital occurred on an average of 21 days after operation. These patients have been operated upon from two and one-half to ten years. All are well and have had no symptoms referable to the gastro-intestinal tract since discharged from the hospital.

Bleeding Duodenal Ulcer

Seven patients were operated upon for repeated massive hemmorhages from a duodenal ulcer. One of these patients received no benefit from a gastro-enterostomy performed four years previously and which on X-ray examination was proved to be functioning as well as could be expected. Four of the patients had received numerous transfusions. Five of the patients had previously tried long periods of dietary treatment. One patient bled so profusely that operation was undertaken only four months after onset of symptoms. Three of these patients were operated upon by the Polya method and four of them by the Billroth No. 2. At operation, six of the patients were found to have very deep, large ulcerations in the posterior wall of the duodenum. One patient had an ulcerated papillomatous tumor on the posterior duodenal wall. Postoperative convalescence was entirely uneventful in all of these cases but one, which required re-suture of wound on the sixth day. This patient was 64 years old. Six of these patients have been operated upon from two to seven years, and one patient less than one year. All patients at the present time consider themselves entirely well, having had no symptoms referable to the gastro-intestinal tract since operation, in spite of the fact that all of them admit no dietary restrictions. In no instance has there been any recurrence of the hemorrhage.

Duodenal Ulcer Without Hemorrhage

Four patients have had extensive resection of the pyloric end of the stomach for duodenal ulceration uncomplicated by hemorrhage. One of these patients was a 46-year-old white woman who had attacks of very severe epigastric pain every two or three months for 16 years, and who for the past three years had been growing steadily worse, in spite of spending a great deal of time in bed and drastic dietary restrictions. The patient had also been frequently jaundiced. At operation the duodenum was densely adherent to the gall bladder, and when the adhesions were separated, a large calloused ulcer on the anterior wall of the duodenum had penetrated almost the entire thickness of the duodenal wall. The ulcer was so large as to preclude any possibility of closing the defect which would follow its excision and preserving the continuity of the stomach and duodenum. The duodenum was divided, the duodenal stump was closed and the pyloric end of the stomach resected by the method of Billroth No. 2. Convalescence was complicated by an attack of pyelitis of three days duration.

Another patient was a man of 47 years of age who had been under continuous observation in the Vanderbilt University Hospital and Out-Patient Department for nine years. Careful and painstaking efforts to relieve the patient of distressing pain by conservative methods had been previously tried, without avail. This patient at operation showed a large calloused ulcer in the posterior duodenal wall which had penetrated deep into the head of the pancreas. Extensive resection of the stomach and first portion of the duodenum was performed. When last seen, nine months following operation, the patient was in excellent condition and had been entirely relieved of his distressing abdominal symptoms.

Another patient is a white male, age 58, who had experienced almost continuously for two years relatively severe epigastric pain associated with repeated attacks of vomiting. The patient's symptoms were not relieved after a period of three months of very careful dietary regimen and complete rest in bed. At operation a very large ulcer was found on the posterior wall of the duodenum, the base of the ulcer extending deep into the substance of the head of the pancreas. The pyloric end of the stomach and first portion of the duodenum were resected. When last seen, six weeks after operation, the patient was completely relieved of his symptoms and was rapidly gaining weight and strength.

The other patient was a young man who had severe attacks of abdominal pain for two years. A diagnosis of duodenal ulcer was not established until the abdomen was opened. Here also the ulcer was too large for a local excision. The duodenal stump was closed and the pyloric end of the stomach resected by the Polya method. This patient, when last seen had been operated upon for more than seven years and considered himself in excellent health at that time.

Persistent Severe Duodenitis

One patient had a resection of the stomach for chronic duodenitis. This patient had so many things to happen to her both before and after the operation on the stomach that for purposes of this communication it is only necessary to say that the patient made an uneventful recovery and it is doubtful how much benefit she derived from that operation.

Conclusions

The results obtained in this group of patients would seem to justify the following conclusions:

1. Resection of the stomach is not an operative procedure associated with serious operative risk.

2. Although there is seldom hope of effecting a permanent cure in carcinoma of the stomach, radical removal of the primary lesion is followed in most instances by marked relief of distressing symptoms.

3. Resection of the stomach is indicated for ulceration of the lesser curvature of the stomach.

4. Resection of the stomach is also indicated for duodenal ulceration associated with repeated severe bleeding.

5. Resection of the stomach is indicated for deep ulcers of the posterior duodenal wall associated with great pain which is not relieved by rest in bed and careful dietary regimen.

6. Extensive ulcerative disease of the stomach associated with syphilis in some instances apparently does not respond to antisyphilitic treatment, and the accompanying distressing gastro-intestinal symptoms can only be relieved by resection of the diseased portion of the stomach.

7. The functional result obtained after wide resection of the stomach is excellent.

8. In our hands the Billroth No. 2 technique has apparently been followed by best results.

The Modern Treatment of Cancer

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Cancer is a fearsome, loathsome and lethal disease. Until very recent years it was regarded by both the profession and laity as a hopeless disease. In spite of all the propaganda that has been spread it is still so regarded by a certain percentage of the profession and a larger percentage of the laity. This attitude is not without foundation, as until recent years all cancers that could not be totally removed by surgical means, either on account of advanced stage or inaccessibility invariably proved fatal. Spontaneous regression does occur, but it is so rare that it is looked upon as a medical curiosity when it does occur. Unlike all disease of microbic origin there does not appear to be any defensive forces in the body to combat its advances and the body does not appear to develop any form of immunity or resistance once the disease has developed except the relative resistance of advanced years. These facts and the appalling increase in its incidence (one of every sixteen deaths is due to cancer) present the most formidable problem before the profession today. The efforts to meet this problem have been and are stupendous and the progress that has been made within the past fifteen years is beginning to bear fruit, not only in the increasing number of authentically reported cured cases, but in the interest that has been universally stimulated. Probably the most outstanding feature of progress is the development of oncology as a specialty and the education and training of a goodly number of men in the profession in the diagnosis and treatment of neoplastic diseases. While the number of these men is small as compared with the numbers in other specialties, they will serve as captain to lead the profession out of the morass of present day confusion and inadequacy in the treatment of cancer.

While the utopian plan of early diagnosis is a consummation devoutly to be wished this paper has to deal with the modern treatment of cancer as it is encountered today and the obligation of the physician to the cancer patient. From the standpoint of treatment, cancer patients are divided into two main groups, i.e., I Salvable or curable, II Incurable or pallative.

Salvable:

While it is not within the range of human power to state accurately whether a given case of cancer is curable or incurable, there are certain criteria that have been developed from experience that permit of as high percentage of accuracy of prognostication as in most other major diseases. The importance of this classification cannot be too greatly stressed as its determination has such a definite influence on any plan of treatment that it is grossly unfair to the patient to fail to do this. An outstanding example of this unfairness is the almost universal practice of performing radical breast amputations on patients with metastasis to the supraclavicular nodes, mediastinum or spine. Again it would be manifestly unfair to carry out the drastic radiological treatment in a hopeless case that would be adequate in a salvable case. Both human and economic considerations should forbid this. It is not within the scope of this paper to discuss the various criteria that complete the picture which determines whether a given case is salvable or not. Here as elsewhere, experience and judgment play an important part.

Treatment of the Salvable Case:

The modern curative treatment of cancer is embodied in surgical removal of the disease, sterilization of the neoplastic growth with irradiation with the physical agents, x-rays and radium, and a combination of the methods. The choice of treatment is determined by many factors that make up a given case as brought out in a complete diagnosis. Surgical extirpation of the disease certainly would be the method of choice where this can be accomplished without loss of life, too extensive impairment of function and too disfiguring cosmetic effect. As recent as approximately twenty years ago surgical attack, (this included cauterization, escharotics) was the only method of dealing with cancer. The interval since then and now has seen the development and use of the physical agents, radium and x-rays, as very effective and trustworthy measures in the cure of the disease. The combined studies of the microscopical characteristics of various cancerous formations and the affect of irradiation on these various cells have brought to light many interesting and useful facts and the practical application of these facts has served to develop the present day basic principles of the treatment of the disease. Tumor cell grading as developed by Broders has been of great value in classifying tumor growths. Experience in the treatment of cancer according to grading has brought out many valuable facts which today play an important part in the choice of treatment. It has been found that the more highly differentiated growths as a rule metastasize more slowly, are relatively radioresistant, while the anaplastic or more embryonal types metastasize early and are highly radiosensitive. This knowledge has furnished the basis of an enormous amount of work and has produced the present day standardization of choice of treatment. Thus it appears that the adult type of tumors lend themselves to surgical removal while the anaplastic forms are best treated by radiological measures. This principle is generally accepted and applied in most large tumor clinics subject to the variations that have been learned from experience. As examples there may be cited adenocarcinoma of the rectum, rectosigmoid and colon in which as a whole surgical removal is the method of choice while lymphosarcoma of the cecum responds so readily to external radiation that it would certainly be the method of choice. Adenocarcinoma of the body of the uterus is treated with the combination of surgery and irradiation, while squamous cell carcinoma of the cervix is treated radiologically almost entirely. In the hands of the most experienced intrinsic carcinoma of the larynx surgical removal by larynjectomy is considered the treatment of choice, while in extrinsic laryngeal cancer, a high percentage of five-year cures are affected with external irradiation. This is the method of choice. Melanoma is a surgical disease pure and simple as no amount of irradiation has proven affective, although it is made up of highly embryonal cells. The nature of the tumor bed has come to play an important part in the selection of a plan of treatment. Thus carcinoma of the vulva is of the type that should respond readily to irradiation, but experience has shown that the most gratifying results are obtained by surgical treatment.

The above discussion is intended to illustrate that surgery has a very important part, both alone and in combination, in the treatment of cancer. I have purposely refrained from using the term "operable and inoperable" in the discussion for the reason that they serve only to confuse the issue. As has been suggested, it would be far better to adopt the terms "curable and incurable" from the standpoint of surgical treatment.

Surgery has a most valuable place in the approach to inaccessible places and cavities for the purpose of implantation of radium and for drainage purposes. Examples of this are seen in cancer of the maxillary sinuses and the urinary bladder.

Post irradiation surgery, principally with the diathermy knife, is frequently a valuable adjunct in the removal of radiation necrosis. Particularly is this true in cancer of the tongue and other intra-oral lesions. Healing is materially hastened by debridement of the radiation necrosis-filled cavity.

Radium Therapy:

The features that have marked the progress of radium therapy in the treatment of cancer are as follows:

1. More intelligent and scientific application of the basic principles discussed earlier, as experience has increased.

2. *Improvement in technique*:
   (a) Standardization of dosage
   (b) More uniform distribution
   (c) Heavy filtration and prolonged irradiation of low intensity
   (d) Care of the tumor bed.

It must be remembered that the clinical

treatment of cancer by irradiation has been evolved out of empirical treatment and the period of this development is very short as compared with the development of other major specialties in medicine. Out of the empirical methods first employed, assisted by the microscopical study of the histo-pathology of cancer, there has been developed the present day standards of clinical treatment.

It has been found that malignant neoplasms of epithelial origin are relatively radiosensitive or radioresistant according to their histological characteristics. That is to say that the more highly differentiated types are more radioresistant than the anaplastic forms. This is accepted as relatively true but there are other factors that enter into the picture and must be taken into account. For instance, a radiosensitive growth in certain locations may be radioresistant. Also the nature of the tumor bed and infection play an important part in the correct evaluation. It was only through accumulated experience that these facts were brought to light.

The standardization of dosage is still the objective of an enormous amount of experimental work. For practical purposes, it is generally accepted that in anaplastic lesions the sterilizing or lethal dosage of radium irradiation is *3 skin erythemas* to the square centimeter of tumor cells, while the more highly differentiated forms require 8-10 skin erythemas. However, the factors mentioned above must be taken into consideration in the application of this dosage.

Uniform distribution of irradiation has come to be recognized as one of the most important factors in this type of therapy. Many devices have been contrived to improve the accuracy of uniform distribution and to overcome the human element of inaccuracy. Not the least of these is the radium cell of small radium content and radon seed for everyday practical use.

Heavy filtration through platinum and gold and prolonged irradiation of low intensity in conformity with the Regande technique in general has superceded the earlier other techniques. However, the recuperative power of tumor cells under various irradiation techniques is still the subject of experimental study.

Consideration and care of the tumor bed is of great importance in order that the best results may be obtained. Often-times the nature or condition or both of the tumor bed is the deciding factor in the selection of surgery, radium or x-rays, as the method of choice. It is in this consideration that the combined used of x-rays and radium work to the best advantage. This is demonstrated in the treatment of bulky and infected growths of the oral cavity with x-rays followed by radium irradiation and in the Healy technique of treatment of carcinoma of the cervix. In both instances the infection is reduced or whipped out and the bulk of the tumor so reduced that the coup de grace with radium is facilitated. In any situation where ulceration and infection exist proper hygienic measures should be carried out.

X-ray Therapy, or external irradiation as it is commonly spoken of in the treatment of cancer has probably made greater advances in the past few years than any other therapeutic agent in the field of medicine. For a good many years, it has been known that the Roentgen unit as the international standard of dose measurement might be credited with giving a renewed impetus to the development of present day methods. The work of Coutard which was begun in 1919, but which did not receive very wide-spread recognition until about 1931, ushered in a new era in the utilization of the roentgen ray as a therapeutic agent. For this reason on the present day technique of administering external irradiation is often spoken of as the Coutard technique, although the variations are considerable. The basic principle in the treatment of malignant neoplastic disease with irradiation is the delivery of an adequate or lethal dosage to the malignant cells with as little damage to normal cells as possible. Experimental efforts to attain this end developed the fractional dose method of external radiation now in common use. This in turn lead to improvement of the factors of the technique of administration. It is not the intent of this discussion to be technical, but it may not be amiss to mention briefly the improvement in factors of technique that permit of more controlled and adequate external irradiation. Filtration increase from one-half mm. copper up to 2 mm. copper and 5 mm. copper in some hands. Target skin distance, increase from 50 cm. to 60-70-80 and 100 cm. *Ports*: Smaller ports and especially the development of circular cones of 2-5-7 and 10 cm. in diameter for use in treatment of malignant disease of the head and neck.

These factors are applicable with the newer 200 K.V.P., 25 M. A., flexible tube stand, shock proof x-ray machine. The improvement in these factors has reduced the mininum two of the obstacles that stood in the way of adequate dosage,namely skin tolerance and ray sickness. It permits of relatively indefinite prolonged periods of treatment in certain situations. Unquestionably the greatest advance in external irradiation is its removal from the field of empiricism and its establishment as a therapeutic measure of proven value to be employed in a clinical manner.

Treatment of Incurable Cancer

This phase of the subject merits detalied discussion, as so little discussion is given to it in the literature. However, space permits only a few brief remarks.

The incurable cancer patient is a pitiable object and on the whole, receives only a small part of the benefit that could be offered him or her. He is a heart rendering burden at home. No physician as a rule assumes a helpless role and resorts to the age old dictum of "give him plenty of morphine and let him die easy." The fallacy of this is only too apparent to those have much contact with these patients. They do not always die in a short time, and often in a short length of time they are the victims of not only the disease but also the morphine habit. Someone made a truthful statement when he said "Morphine for the first three weeks is God's medicine, after that the devil's."

The late Dr. Greenough stated that the palliative service of the Boston Cancer Clinic was probably more appreciated by the patients than the curative results.

In the way of palliation much can be done for these patients by surgical and radiological measures, by proper and systematic hygienic measures and the employment of the milder analgesic drugs. These patients can be made more comfortable, less loathsome and morphine addiction put off if not prevented. To accomplish this latter, the solicitude and interest of the family physician must be enlisted.

The urgent need of these patients is the establishment of nursing homes where the proper care can be carried out. This movement has been started in several of the Eastern States and a number of such institutions have been established.

The cancer patient is certainly entitled to the same consideration given the tubercular patient and it is to be earnestly hoped that the new spring drive launched by the American Society on the Control of Cancer will bear some fruit along these lines.

The Clinical Aspects of Amebiasis*

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The Chicago outbreak of acute intestinal amebiasis in 1933, as a result of which over 1000 cases and 40 deaths occurred throughout the country, has reawakened the interest in the many problems of this wide-spread disease. Generally considered a tropical disease, physicians in most parts of the United States have consistently refused to admit its potential menace, as revealed by the extraordinarily high incidence of "carriers" without obvious symptoms (who have tissue damage nevertheless), along with active cases found on systematic surveys in different parts of the country.

In 1928 Magath and Ward[1] of the Mayo Clinic found 36, or 7.9 per cent, positive out of 457 patients examined. Craig[2], in 1932, examined 189 officers of the Medical Corps of the U. S. Army at Washington, D. C., and found 24 or 12.7 per cent positive, even though these physicians had never been out of the country. I[3], myself, reported 32 cases in 1931 in the Pacific Northwest, and these individuals had never been out of the States of Washington and Oregon. Farther south, in Tennessee, Meleney[4], in 1930, out of 4,987 persons examined, found 861, or 7.3 per cent, positive for E. histolytica. Seckinger[5], Georgia, made the first actual survey in two rural counties near Atlanta for the State Board of Health in 1934, and found out of 323 individuals examined 66, or 22 per cent, were positive for amebic infection—in 69 families the infestation was 55.9 per cent and this very strongly suggests that important sources of infection occur within the family after it once is introduced. The contamination of surface wells, aside from contact infection, played an important role throughout this area.

In discussing today as broad a subject as amebiasis, it would be improper to present other than a clear and condensed outline of the practical matters at issue. By the term, "amebiasis," is meant the invasion of the tissues of man by the pathogenic ameba, the E. histolytica, primarily through the mucosa of the colon which may be followed by symptoms, varying all the way from slight digestive and nervous disturbance to the most severe paroxysms of amebic dysentery. From this definition, as given by Craig[6], it will be noted that amebic dysentery is simply a part of the clinical picture of amebiasis, and it should always be borne in mind, that while amebiasis is a common infection—amebic dysentery in this country is comparatively rare. Amebiasis is probably endemic in every community of any size in the civilized world, and, yet, it is rarely diagnosed.

There are many reasons why amebiasis is so frequently overlooked. In the first place, much of the work done on the life history and the means of identification of the pathogenic ameba has been done by biologists and parasitologists and not by physicians, and their reports have not appeared in journals, readily accessible to the profession. Even the splendid contributions of such physicians as Col. Chas. F. Craig[6], of Tulane, do not seem to have impressed the general practitioner or the specialist with the real gravity and the frequency of the disease.

In the second place, the medical profession in general has a serious misconception concerning amebiasis. Many textbooks still describe it under the name of amebic dysentery, and we look upon it as a tropical disease and, therefore, ignore the frequently disabling and milder and more common condition of amebiasis, as it occurs in temperate zones.

The third reason, why amebiasis is not recognized as frequently as it actually occurs, is that the symptomatology of the disease is exceedingly confusing. There are no pathognomonic symptoms or physical signs to be found on clinical examination that definitely characterize amebiasis. The diagnosis is made only by repeated examinations of the stool by properly trained men who are able to differentiate the pathogenic Endamoeba histolytica from the four non-pathogenic amebae found in the intestinal tract.

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*Read before the Pulaski County Medical Society, Little Rock, Ark., October 26, 1936.

The fourth and most important reason that amebiasis has escaped recognition so frequently is that its final diagnosis depends on the laboratory, and the laboratory has in many parts of the country grievously failed in this phase of its service to the physician and their patients. Even, when the physician asks specifically that a specimen be examined for Ameba, the laboratory worker frequently lacks the experience to identify the different species and their cysts.

I think the time will come when the roentgenologist, together with the parasitologist, will aid materially in the diagnosis of this condition. Vallerino[8], in 1925, contributed an excellent series of observations regarding findings with the roentgen ray in intestinal amebiasis, and he states that filling defects were found in all cases of amebic infestation of the intestine, showing definite symptomatology, whether mild or severe, and that he was able to determine the extent of the intestinal lesion in this manner. Bell[7] confirmed his work in 1935.

Amebic infection, found in temperate regions, is a syndrome, characterized by two outstanding symptoms: 1. Colon consciousness. 2. Fatigability. The symptoms may be of a nature so diverse, bizarre and unexpected, that no diagnostic help may be afforded from a clear-cut symptom complex. One or more of the following symptoms may be complained of: anorexia, nausea,bloating during and after meals, soreness or fleeting pain in the right or left lower quadrant, constipation, alternating with an occasional attack of mild or severe diarrhea, which the patient as a rule ascribes to some dietary indiscretion. Or again, the symptoms may be referred to the central nervous system entirely. The most prominent symptom is fatigability. The patient who has amebiasis is easily fatigued. He is tired all of the time. He goes to bed tired, he gets up tired, and his weariness even becomes painful. Many of these sufferers pass from doctor to doctor, and are labeled as neurasthenics. They are nervous and irritable, and complain to you about peculiar headaches, a pressure in the head or poor memory. They wake up in the night because of numbness in their arms and legs. Sweating of the palms of the hands and soles of the feet are symptoms frequently elicited. Subnormal temperature or low grade fever may be present.

One patient I treated for amebic colitis in 1934 came to me a year later, and complained of a peculiar bitter taste in the mouth, noticeable only before and during eating. Repeated smears of the gums for Vincent's disease were negative. I finally checked up on his stool and found he had a relapse of his amebiasis. This taste in both individuals disappeared rapidly on specific treatment.

Secondary anemia from chronic slow blood loss, and loss of weight is common. Then again there are long intermissions with apparent well being, followed by new recurrences and exacerbations. Arthritis, usually multiple, is often seen.

Five clinical types are commonly met with:

Type 1.—The individual often with no symptoms for years, presumably due to a specific immunity or resistance, and is wrongly called the apparently healthy carrier. Cysts are more or less constantly found in the stools.

Type 2. —The patient with mild infection most commonly seen in the temperate zone. Constipation, alternating with looseness of stool or mild diarrhea, vague intestinal and nervous complaints, and fatigability are the outstanding symptoms.

Type 4. —The individual with dysentery, comparatively rare here. This condition is characterized by frequent stools, ten to twenty in the day, intense pain and tenesmus, presence of blood and mucous, prostration and fever.

Type 5.—Rarer still, the patient with amebic hepatitis and amebic abscess of the liver.

The diagnosis of amebiasis rests not on the symptomatology, but on the routine microscopical examination of the patient's dejecta. We do routine urinanalysis and blood counts, but we hesitate to do routine stool examinations. Why? Because it is messy and not exactly pleasant. An important thing is, to put your patient for three days on a diet without red meat and green vegetables. If the benzidine test is strongly positive for occult blood, the patient is bleeding somewhere in his gastrointestinal tract. Hemorrhoids are easily ruled out by getting a specimen of stool with the sigmoidoscopic examination, take a swab from it and examine the mucus or debris. You will usually find trophozoites on swabs taken from these ulcers. Cysts are usually found in the solid stool after centrifugation and staining the specimen with the iodine eosin stain of Donaldson.

When several direct examinations are negative, and you suspect amebiasis, cultures should be made on one of the recognized culture media. It is important, however, for the laboratory technician not to use the bacteriological transplant method with the small piece of stool of the size of a split pea.

Time does not permit to discuss the laboratory phases and the different types of amebae found in intestinal tract of man. Suffice to say, that we are able to differentiate the cysts or encapsulated forms of the amebae staining them. The cysts of the E. histolytica are usually bi- or quadrinucleated, while the cysts of the ameba coli are much larger and octinucleated. The motile forms or trophozoites are found in mucus of ulcers or in the liquid or semi-liquid stools, freshly passed. The trophozoite has a granular endoplasm and an ectoplasm that is most noticeable when the ameba is moving. Pseudopodia are thrust out in a sudden, explosive manner, and appear as hyaline clear projections from the body of the parasite. The endoplasm, or body of the parasite, contains one nucleus, eccentrically located, red blood cells, and a glycogenic vacuole. Transmission of the disease is most commonly brought about through dirty fingers, and also through a contaminated water supply, as was demonstrated in the Chicago outbreak. When a cyst is swallowed with contaminated food or drink, it will hatch in the terminal ileum, and eight small amebae crawl out of the cystmembrane. Food handlers in our hotels, restaurants, lunchrooms, and all other places where food is handled and sold, are chief sources of amebic infection in well sanitated towns, hamlets, and cities. It is regrettable that our state health departments do not consider stool examinations compulsory in the health survey of food handlers and restaurant workers. The importance of intrafamilial infections cannot be overemphasized. One member of the family will readily infect another, especially, if fingers are not scrupulously cleansed before handling food. Two years ago I treated a man for amebiasis. His daughter became infected while on a visit here, by using the same colon-tube (unsterilized), while taking an enema.

The differential diagnosis of E. histolytica. The amebae, most frequently encountered in the intestional tract of man are the E. histolytica, the ameba coli and the Endolimax nana. In routine examinations of the feces these are the species that, in the vast majority of instances, have to be differentiated, while Iodamoeba buetschlii and Dientamoeba fragilis, because of their comparative rarity, may be practically ignored.

The treatment is of the utmost importance. Insufficient treatment or neglect to check up on stool examination every month for at least six months will often lead to relapse. The amebicides which have stood the test of time and are used generally, are the halogenated oxyquinoline compounds, such as chiniofon and vioform, and the arsenic compound, carbarsone. Each one of these drugs was introduced with the sincere hope that it would cure this insidious disease. However, relapses are not infrequent with all these drugs. Persistent and prolonged treatment by alternating the above mentioned amebicides—varying the amount of ammunition so to speak—and the oral administration of large doses of bismuth subcarbonate (one teaspoonful every 4 hours) in patients with chronic indolent ulcers will eventually produce a cure. Emetine, given subcutaneously in one grain doses, has been looked upon as the standard treatment for some time. It cannot be emphasized too strongly that emetine should only be used in those patients who have dysentery or amebic abscess of the liver. Why? Because emetine does not destroy the cysts, and when used alone, is often the cause of relapse. Emetine injections relieve diarrhea promptly, but should be stopped, as soon as diarrhea ceases.

During the past four months, I have been using the new amebicide diodoquin, a new double hydroxyquinoline compound, containing 69 per cent of iodine. The drug has two advantages: first a greater amebicidal power because of its greater iodine content, and second, it does not cause the troublesome diarrhea as chiniofon does. Cysts and trophozoites disappeared in 10 patients sofar treated, in from 5 to 10 days. Diarrhea and other distressing symptoms disappeared rapidly. More time and more cases are needed in order to evaluate this new drug and to determine if relapses are as frequent with diodoquin as with other amebicides.

Rest, and a soft bland diet, rich in iron and vitamins is indicated. Alcohol and tobacco should be forbidden. Alcohol increases peristalsis, while the alkaloids of tobacco may cause necrosis by spasm of the arterioles in inveterate smokers and chewers, and thus prevent ulcers from healing. The eradication of infections—focal or general—is necessary, as they will lower the resistance of the patients and encourage relapse. Two of my patients had four and six relapses respectively, until I discovered one had a chronic subtertian malaria and the other had undulant fever.

In concluding, may I call again your attention to the importance of amebic infection, as it exists in the U. S. today. If we remember: 1. that amebiasis is a common infection and is frequently not diagnosed. 2. that routine stool examinations should be made on all patients, presenting obscure intestinal and nervous symptoms. 3. that constipation alternating with occasional attacks of diarrhea is a frequent complaint. 4. that amebiasis is not a tropical disease, but, like the poor, is always with us, and 5. that the disease is an important public health problem, we shall be able to help many a patient, who goes from physician to physician unrelieved.

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Yellow Fever In Mississippi 1878-1905

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Chapter X

CONCLUSION

With the ending of the epidemic of 1899 my personal activity in efforts to control yellow fever ceased. My office as general state quarantine and sanitary inspector ended in October of that year, and I returned to my private practice at Water Valley. Early in January, 1900, I had the following message from Dr. J. F. Hunter, of Jackson: "Come to Jackson at once, not Board of Health matters." I had no idea why I should be called so urgently, but on my arrival there, Dr. Hunter told me of the recent death of Dr. Wirt Johnston, and said that he wanted me as partner in his practice, and wished me to go to work at once, since there was so much more sickness than he could look after. The legislature was in session, and many of the members were sick, and there was an epidemic of measles among the children, besides other sickness. His offer of an equal partnership in the practice was immediately accepted, and within an hour after my arrival I went to work, and the first place visited by me was the Deaf and Dumb Institution, where I found 90 cases of measles.

Doctors Hunter and Johnston had divided the best practice in Jackson about equally, and I fell heir to a large part of Dr. Johnston's clientele, which kept me very busy until the 8th of February, when I was taken sick with a severe attack of pneumonia. It was the last of March before I was well enough to move my family to Jackson, and resume active work. For seven years Dr. Hunter and I enjoyed a large and lucrative practice. In 1907 my health gave way, and I was forced to retire from the arduous work, and after a year of rest and travel, not being fully recovered, I moved back to Columbia, Tennessee, my native place. I did not undertake to practice here for several years, and was just beginning to develop a satisfactory work when the World War began, and the United States, in 1917, entered into the conflict. I was appointed by President Wilson, medical member of the Selective Service Board of Maury County, of which Board, Mr. W. P. Ridley was chairman, and Mr. J. J. Gray, the other member. For eighteen months, as a member of this Board, I did some of the hardest work of my life, not excepting even the strenuous work of epidemic yellow fever. After the armistice, I closed my office and have not attempted to do any general practice since. And so ends my officials life.

My term of office as a member of the Mississippi State Board of Health expired in 1904, and, I declined allowing my name to be presented to the Mississippi State Medical Association for re-nomination for appointment by the Governor. After 1899 I saw no more yellow fever, but was called in consultation to see a suspicious case or two in Jackson in 1905. I remember one case, especially, an Italian down on Roach Street who was attended by Dr. Rhodes, who felt very confident that the man had yellow fever, and I was asked to see the patient with him but could not be satisfied that it was yellow fever. Dr. Rhodes could not be satisfied that it was not yellow fever, so there was much excitement in Jackson, and to settle the matter Governor Vardaman had Dr. Eugene Wasdin from Mobile called into the csse. After a thorough examination and after finding the malarial plasmodium in the blood, Dr. Wasdin decided the man had aestivo-autumnal fever, and the diagnosis was accepted and excitement allayed, there being no development of yellow fever from this case. Later in this year, 1905, yellow fever was announced in New Orleans, and as usual Mississippi became infected, especially the southern and middle parts of the state. Although five years after the discovery of the transmission of yellow fever by the female stegomyia fasciata mosquito, there was the usual or, if possible, a greater amount of panic and confusion. Since I had no active personal participation in the work of handling this epidemic, I am giving here a splendid sketch of the epidemic by Hon. Dunbar Rowland, Director of the Department of Archivees and History, of the State of Mississippi.

"The State Board of Health was informed through the office of the Surgeon-general at Washington July 20, 1905, that there were cases of yellow fever at New Orleans. The Board at once called in session, and on the 21st, quarantine was proclaimed against the Louisiana city. Accepting the demonstration at Havana and elsewhere that the disease was communicated by the striped house mosquito (stegomyia fasciata), no embargo was put on freight, express, baggage or mail, as had been done in former quarantines.

"Upon request of the executive committee and the Governor, Surgeon Eugene Wasdin, of the Marine Hospital, was detailed on the Mississippi Coast, and was afterwards the health officer for that part of the state. Guards were placed at the State Line, and inspectors on the trains from New Orleans. It was officially known July 22 that the disease at New Orleans was yellow fever, and Secretary Hunter issued a proclamation calling on the local authorities to begin a war of extermination against the striped house mosquito, according to the well known methods. The surgeon-general was requested to take charge of train inspection on the New Orleans lines, and Surgeon J. H. White, of the Marine Hospital service at New Orleans, took charge of the train inspection out of that city for Mississippi on July 25. The quarantine order was extended to the entire State of Louisiana, and all travelers in Mississippi were required to have health certificates, July 28. The old-time panic was in evidence at various places; there was a clash of the naval patrols along the indefinite maritime boundary of Louisiana and Mississippi, that caused some excitement, and a general feeling, openly expressed by Governor Vardaman, and afterward established beyond doubt as true, that the health officers of New Orleans had concealed the disease as long as possible, and until it had spread in advance of quarantine regulations, threatened the amicable relations of the people. There were indications that the fever was about to make a fatal record, and the Louisiana authorities called upon the United States Marine Hospital to take control, a large sum of money being raised to meet the expenses. The Marine hospital officers had full control in the city, and also cooperated with the health departments of Mississippi and other states in regulating travel, and its surgeon traveled by special trains to diagnose every suspicious case as soon as reported.

"Business was paralyzed throughout the state until the last week of October, but by a thorough campaign against the mosquito the disease was put under control in New Orleans, and its spread prevented in the Mississippi towns; while the fact was demonstrated beyond doubt that with prompt and rational treatment, yellow fever forever had been deprived of its fatal and destructive sway over the Gulf states.

"The first case reported in Mississippi was an Italian refugee at Lumberton. The man was screened from the possibility of infecting mosquitoes, and no other case occurred there. At Sumrall there was the same experience. Several cases were reported at various points from time to time, which were malarial, and the immediate investigation by experts, conveyed on special disease was diagnosed at Mississippi City, August 14, and Dr. Charles LeBaron was put in charge as State Health Officer. Afterwards the disease developed at several places, at each of which a state health oficer was put in charge, assisted on the gulf coast by Dr. Wasdin, and on the river by Doctors Guiteras and Lavendar, of the Marine hospital. The fever had prevailed at New Orleans in the Italian quarter for several weeks before it was reported, and several excursion trains from Mississippi to the city had served to convey infection. A negro excursion from Vicksburg, July 20, is believed to have been the source of the disease in that city, which came under observation a month later. Following is the record, from Dr. Hunter's report, giving the date of diagnosis, and name of state health officer put in charge.

"Mississippi City, August 15; Dr. Charles LeBaron, officer; cases 96, deaths none. Pearlington, August 26, Lebaron, officer; cases 4, deaths none. Handsboro, September 16, LeBaron, officer; cases 15, deaths none. Moss Point, September 20, reported 29, Dr. B. F. Duke, officer; cases 3, deaths none. Scranton, September 20, Dr. Duke, officer; cases 4, deaths none. Gulfport, August 25, Dr. Eugene Wasdin, officer: cases 118, deaths 3. Natchez, August 27, Dr. W. H. Aikman, officer; cases 196, deaths 9. Vicksburg, reported 29, Dr. H. H. Haralson, office; cases 210, deaths 21. Harrison, September 22, Dr. J. C. McNair, officer: cases 2, deaths none. Roxie, September 7, Dr. J. H. Wood, officer: cases 27, deaths 5. Hamburg, September 12, Dr. T. K. Magee, officer: cases 63, deaths 15. Port Gibson, September 23, Dr. G. W. Acker, officer: cases 62, deaths 4. Rosetta, September 11, Dr. J. H. Anders, officer: cases 38, deaths 6. At Natchez, there was the most prompt and active cooperation with the board of health. Citizens aided the physicians in allowing no cases to be concealed. The physicians reported without delay or attempt to humor influential patrons. The fight was made against the mosquito, and the patients at the hospitals, who were carefully screened, were visited by their friends without alarm and without infection. In all places where the disease disappeared or where it was feared, cisterns and pools were screened or oiled and some attempts made at fumigations, though it was for a time difficult to overcome the former notions that the disease was a "mysterious dispensation" of providence. Dr. Hunter wrote, "When yellow fever was announced in New Orleans on the 21st day of July, I must confess that I was almost staggered by the news, especially when I realized the effect 'hat we had at least three months to fight the disease, and $5,000 emergency fund to make the fight with. The executive committee of the State Board of Health, realizing the dreadful calamity that would befall the people of our state, determined to make a bold fight to protect them." When it became evident that the disease would rage in epidemic form in the state, Governor Vardaman wrote a letter to each member of the legislature, stating he case, and in response received promises of support that authorized him to borrow money for quarantine purposes. The expense incurred was about $45,000. The unprecedentedly mild winter of 1905-06 caused fear early in the latter year of a renewal of danger, and the war on the mosquito was resumed early in the spring, the whole situation being aided by the congressional quarantine law, adopted largely through the efforts of the Mississippi delegation."

This was the last epidemic of yellow fever in Mississippi or in the United States. Science has met and conquered "Yellow Jack." No longer do we, especially of the South, have to stand in awful fear of an invasion of this terrible pestilence, so long as sanitary measures are enforced and mosquitoes prevented from infecting any patients who may possibly be brought into the country. This victory over yellow fever equals, in its beneficent results, any of the other marvelous inventions or discoveries of the 19th century. Neither Marconi, Edison, Jenner, nor Pasteur brought greater trophies to the altar of science than Reed, Carter, Finlay and others who furnished various leads to the establishment of the transmission of yellow fever by the mosquito. Finlay had the idea, Carter held the key, and Reed demonstrated the truth of the ideas of Finlay and Carter.

The Mississippi State Board of Health deserves to be placed on record, as having assisted in this great work by furnishing data upon which Carter established the law of the "extrinsic incubation period of yellow fever", the key to the solution of this mystery.

Having now narrated most of he incidents and activities in which I, personally, had a part in connection with yellow fever from 1878 to the end of its existence in this country in 1905, I close my story.

I remember in a letter from Surgeon R. D. Murray, from Texas, shortly before he was killed by being thrown from a buggy, he used this expression: "I am lagging superfluously behind." So it is with me, I have reached the "lean and slippered pantaloon stage of life" and have done the best I could under the circumstances. Looking back on a long life I am thankful, and I think my most interesting year was 1898, in connection with the handling of the fever in North Mississippi when I was so closely and pleasantly associated with Surgeon H. R. Carter. He and I were the same age, born the same year, and somehow we naturally seemed to be drawn to each other. I shall never forget him. He was a great man. His name is "one of the few immortal names that were not born to die." In closing, my acknowledgments are due Doctors George H. Ramsey, E. L. Bishop, and W. A. Sawyer for giving me the opportunity of putting most of my work in Mississippi in connection with yellow fever on record. I wish to express my appreciation too, of the courtesies extended me by Dr. H. C. Busby, Director of the Maury County Health Department, and the assistance of his efficient and painstaking clerk, Mrs. Mary Gamble, who has patiently copied and recopied these articles. I am indebted too, to Vanderbilt Medical Library, Nashville, and to Dr. George C. Williamson, Columbia for access to books of reference. These articles have been written under difficult conditions, and with a sense of increasing decreptitude. My story is ended, "Morituri te salutamus."

THE MISSISSIPPI DOCTOR

The Journal with a vision, the delivery of modern medicine to the masses at less cost to the individual and more profit to the practitioner. The champion the small hospital, the hub around which this service must be built.

W. H. ANDERSON, M.D., Editor and Mgr.
MILDRED P. ANDERSON, Assistant Editor

OFFICIAL ORGAN OF
Mississippi State Medical Association
Mid-South Postgraduate Medical Assembly

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Entered as second-class matter, January 19, 1926 at the post-office at Booneville, Miss., under the Act of March 3, 1870.

Post-Graduate medical instruction carried out to the busy practitioner is a great step forward.

Hospital insurance has one good Bible principle in that the man who does not have sickness helps to pay the one who does. But it has serious drawbacks also.

If surgery is good in tuberculosis, then early surgery is more valuable than late. In modern day practice the later stages should not be reached.

In the May issue you will read papers from Drs. Isadore Cohn, of New Orleans, and G. A. Hendon, of Louisville, Ky. Again you will be very fortunate.

In the application of the known medical facts, Mississippi is going forward and the progress is going to gain momentum.

Zoning of counties to certain hospitals for charity should be withheld as far as possible in our opinion. Leave every man as free as possible to go to the hospital and to the doctor he likes best.

You will be delighted to know that Dr. King of New Orleans, one of the outstanding men in obstetrics in the Southern states, will have the paper he was to have read at the Mid-South at Memphis ready for publication at an early date. It will be worth the price of *The Mississippi Doctor* for one year.

The May issue of *The Miss. Doctor* will be a special Miss. State Medical Association Edition. We expect to send every practising doctor in the state a copy whether he is a member of the association or not. It will consist of more than a hundred pages. For this special issue we need all the help and all the cooperation possible.

In the poor and sparsely settled sections of our state it is impossible for the practitioner to make the money he deserves and must have to keep up in the profession and to take care of his family as they should be. This is a statement of fact. Now come along with your remedy.

Make your arrangements to attend the annual meeting of the Miss. State Medical Association in Meridian in May. The hospital association will hold its session on Monday, May the 10th. The Post-Graduate Course in Pediatrics arranged for by the progressive president of the State Medical Association will hold a session the same day also. This program you can ill afford to miss. It will be a treat. It is a big step forward. The hospital association should have a most interesting program. The question of hospital insurance will no doubt be one problem to discuss. An unusually good program for our state association has been arranged. The program will no doubt be one of the best we have had for many years. The city of Meridian is making the most elaborate preparations for entertainment that has been made prehaps in the history of the association. Conditions are better in every way than they have been for a number of years. President Garrison has done a lot of fine constructive work for the association ably aided by the president-elect Dr. W. L. Little. Many men in the association have come to feel that they are really a part of the association. It is time to revitalize our state meeting It has been good, but yet it has not served as well as it might have. If at all possible every doctor should attend his state meeting. It will be good to be in Meridian for a few days. We believe the attendance will be a record breaker this year.

Doctor Otis Warr, president of the Memphis and Shelby County Medical Society died on March 22, at St. Mary's Hospital, Knoxville, Tenn. He was on a visit to South Carolina and was stricken with pneumonia at Gatlinburg while stopping over night. He was fifty-six years old. He was not a robust man and was badly over-worked. Dr. Warr was a member of the faculty of the University of Tennessee since 1911. Dean O. W. Hyman declared him the most beloved man on the staff. He was a specialist in internal medicine, an authority on the treatment of heart disease.

He was a frequent and gifted writer on varied subjects for medical publications, he devoted much of his time to the work of the local society as well as the other professional groups of which he was a member, including the American Medical Association, the American Association of Physicians, the American Heart Society and the Southern Medical Society.

Dr. Warr was born in Darlington, S. C., April 30, 1881 and after his preliminary education there, he attended George Peabody College in Nashville. He entered the University of Nashville, medical department, which is now the University of Tennessee, in 1904, graduating in 1907.

He did interne work for four years in New York hospitals, including two years at Bellevue and in 1911 began practice in Memphis. In 1913 he did post-graduate at Harvard and in 1913-14 was professor of physiology at the University of Tennessee.

A post-graduate course at the University of Tennessee in 1914 was interrupted by the outbreak of the World War. Dr. Warr applied for medical service with the American Army and acted as a member of the medical advisory board.

He had served as secretary of the Memphis and Shelby County Medical Society in 1918-19 and was active in the annual clinics of the Mid-South Post-graduate Medical Assembly.

Dr. Warr leaves, besides his wife and son, two daughters, Mrs. Doris Thorne, wife of Elmer E. Thorne of San Francisco ,chief officer on the S. S. President Taft of the Dollar Line, and Miss Boyce Warr of Memphis. He also leaves a brother, Leslie Warr of Lamar, S. C.

Doctor Otis Warr was really and truly the beloved physician. He was revered and respected by members of the profession. He was loved and trusted by the people of the Mid-South. Scores of physicians of our territory depended upon him as a consultant. It was always pleasant and profitable to consult with him. He was an earnest and a diligent student. He kept informed. He was safe. He did a great work for organized medicine. He was one of the corner stones in building the Mid-South Post-Graduate Medical Assembly to where it is now. He was a man of vision and practical application. He was kind, tender and considerate, but yet very courageous. We will miss him. We deeply regret his going. Peace and rest eternal to his noble dust.

This has been a month filled with good things and pleasent experiences. First we accepted an invitation from members of the Central Medical Society to attend its recent meeting. Its program was turned over to members of Vanderbilt Faculty. The session began at one o'clock and ran almost continuously until ten. It was a splendid program and was very interesting and instructive. Then we attended the New Orleans Post-graduate Assembly the following week. This meeting was fine, too. The speakers were, for the most part, fully up to the highest standard and much benefit must have been received by those in attendance. The attendance was nothing like so large as we have had at the Mid-South Assembly, nor do I think the character of the discussions quite up to our standards. However, there were quite a number of lectures that could not be surpassed any where. I do not see how any one can purposely deny himself the benefits that come from meetings of this type. Post-graduate instruction from recognized authorities is imperative if one expects or wishes to keep abreast of progressive medicine. And since so few can afford the expense in money and time to go away for regular courses of instruction, the solution of the matter is for such instruction to be brought to us at frequent intervals. Next after the New Orleans meeting came the Booneville meeting of the Thirteen-County Society. This meeting was, in many respects the best for many months. The program was very good. Dr. Cohn gave us a most interesting and illuminating discourse on splenomegalies. It was a wonderfully simple but forceful presentation of the subject, well suited to the needs of both the internist and the surgeon. Dr. Cohn is one of the strongest men in the South and is a delightful speaker. It may be a long time before we have a better man to visit us. Dr. J. Gould Gardner was the exchange speaker. He gave us a clear and a comprehensive discourse on a very important subject, namely, "infections of the hand."

After a delightful and sumptuous dinner which was served in the church social hall by the ladies, Dr. George Hendon gave us the fullest and most interesting history of the life and labors of Dr. Ephriam McDowell that we have ever heard. He, also, paid high and deserved tribute to the faith and courage of the woman who first gave herself to demonstrate the possibility and feasibility of abdominal section and ovariotomy. His subject was the true relation between physician and patient. He summed the matter up as ability, courage and integrity on the part of physician and faith and courage on the part of the patient. These were well exemplified by the characters chosen for discussion. Then as a finale of the month's feasting on good things, came the series of lectures given in Amory throughout last week by Dr. R. A. Strong. Dr. Strong is, indeed, a good teacher of his special subject — pedriaties. His course of lectures was most excellent and timely. He brought to us just the things most necessary and essential to keep the rural physician abreast the current of the times. No fads or fancies were presented, but, instead,he gave simple and proven facts. And it was noticeable that he scarcely mentioned medicine in the sense that it was formerly viewed and given. (Oh the tragedy of dosing babies with drugs, as was formerly done.) Doctors cannot, or will not, go after teaching—it must be brought to them. Let us encourage every effort and means that can be employed to accomplish this. It so happened that the Kiwanis club of Amory held its weekly meeting just at the close of this series of lectures and it happened that Dr. Henry Boswell and Dr. Felix Underwood were in town and were invited guests at this weekly banquet. Those who know these men know, full well, that splendid talks were given by them. Dr. Strong also spoke in tribute to the work that has been done and is still being done under the direction and supervision of these splendid executives. He stated that Henry Boswell presides over one of the greatest institutions of its kind in the nation or the world, for that, and that Underwood is giving Mississippi a health program second to none in the nation. We all know these statements to be true. I wonder if we appreciate the work as we should and I wonder if we support these men as they deserve to be supported?

Just one more month until the Meridian meeting of Mississippi State Association. Let us *all* plan to go and then let us *go*.

G. S. B.

Letters to the Editor

Dr. W. H. Anderson:

I am indeed pleased to see that editorially, both in your paper the Booneville Independent and *The Mississippi Doctor,* you are touching on a phase of hospitalization for Mississippi to which I have given considerable thought.

I am sure that you recall that I read a paper at the Houston meeting, in 1932, in which I used certain State Institutions, and radiating therefrom, community hospitals as a factor in building up a pioneering system of hospitalization with a systematic dissimination of scientific medical information which would place Mississippi Medicine in the forefront and guarantee a service to our people which the medical profession as a whole has been striving for.

I am prepared to discuss this phase of our hospital situation with any group of men who may be interested.

You can readily see that by the proper use of the T. B. Sanatorium, and the State Hospital for the insane in cooperation with the state charity hospital at Jackson, we offer an interneship unexcelled by any state. This coordinated with the community hospitals would give us an approved state wide hospital service.

The question of finances has been raised, I do not believe that an increase would be necessary at all, simply a re-adjustment of system.

Sincerely yours,
J. A. Rayburn.

Dr. W. H. Anderson:

On January 12, 1937, Dr. E. D. Boozer, was called from the walks of men, Dr. Boozer, had been practicing in this territory for 26 years, this territory is now vacant and we are badly in need of a good doctor here .

This is a large territory located in a good farming section. The land is divided in small farms and a large number of the people own their homes. At least 98 per cent of the population is white people, most of the roads are rocked and we are sure of T. V. A. power in the near future which will give many conveniences to life in this territory. I am sure this is a good location for a good man.

I have been informed that you are editor of *The Mississippi Doctor*. Would be glad if you would carry a notice of this vacancy in your paper for two or three issues, and if there is any charges for the ad, please send the bill to me. If you can help us to locate a good physician surely would appreciate it.

Thanking you in advance for any service rendered, I am

Respectfully,
H. O. Harris.

Dear Dr. Anderson: .

The little town of Vancleave, Miss., is in dire need of a doctor to come and live there.

The residents of this place have been without a doctor for several months or since Dr. Radliff died. I have been requested to make inquiries through you and possibly you could help them get a doctor to make his home in Vancleave.

As it is now, the nearest doctor is about 23 miles from there, at Ocean Springs, Miss., and several families have lost some members of their family due to not being able to pay for medical service at such great distance as it is terribly expensive.

I, as well as the people of Vancleare will be most grateful for any information or help you can give us.

Thank you kindly for a quick reply.

Sincerely,
Mrs. L. Maxwell,

My Dear Dr. Anderson:

We have received in our library the last two copies of *The Mississippi Doctor*. And we thank you for having placed our library on your mailing list.

This journal will be placed in our journal room for the use of the medical students and staff members. It will undoubtedly be of great use to them as it is filled with interesting articles.

Sincerely yours,
E. L. Kriebel,
Librarian.

Dr. W. H. Anderson:

The 1937 meeting of the Louisiana State Medical Society will be held in Monroe, Louisiana, April 26-28. If consistent we would appreciate it if you would carry an announcement of this meeting in the April issue of your journal, extending a cordial invitation to the doctors of Mississippi to attend.

With very best regards, I am

Yours very truly,
P. T. Talbot, M. D.,
Secretary-Treasurer.

The doctors of Mississippi thank you, Doctor Talbot, for this cordial invitation to your state meeting. No doubt many will attend. We know we will be cordially entertained by the doctors of our sister state and professionally be benefited by your splendid program. Ed.

DR. WALLER S. LEATHERS

By

Felix J. Underwood, M.D.

Members of the Central Medical Society and guests:

This is a memorable occasion! But, my

friends, I cannot enjoy it to the fullest because memories of other days engage my mind and crowd out, to some extent at least, the unrivaled opportunities afforded by this meeting today and tonight.

Next to my mother, I owe more to the long-time friend now to be presented to you than to any other person. Though she is gone, this unselfish friend is still encouraging and helping me along the weary miles of public health.

His history from birth to date, *I* know. *His* brilliant record from the time of his graduation at the University of Virginia until tonight, *you* know. Therefore, I shall not take the time to trace the milestone of his progress, or to relate his brilliant successes. Under his matchless leadership as Dean, Vanderbilt School of Medicine and Public Health, the greatest in the South, is destined to become the greatest in the nation. The courses, under the country's most competent instructors, are made practicable by the application of common sense and good clinical and field work by the Dean and his associates.

Since Dr. Leathers became Health Officer of Mississippi, in 1927, there has followed a golden age of achievement. His dreams of public health for the state have come true. During these few busy years, when this master builder worked eighteen hours a day, the solid foundation of the state health program was laid.

My friends, our prodigal son has returned to us. We kill the fatted calf and bring the best robes from our wardrobes of affection and esteem. Unlike the prodigal, however, we are denied the joy of keeping him here with his medical and public health family in Mississippi.

Believe it or not, I would gladly yield to him at this moment his former place of honor and ask no greater privilege than to be his associate. As in other, and perhaps happier, year, he would have my unswerving loyalty and my best efforts.

Washington is known as the creator of our freedom and liberty—Father of our country! Waller S. Leathers is recognized—and history will so record him—as the father of preventive medicine in Mississippi— a public health program daily consecrated to saving human lives and preserving health and happiness for a great people.

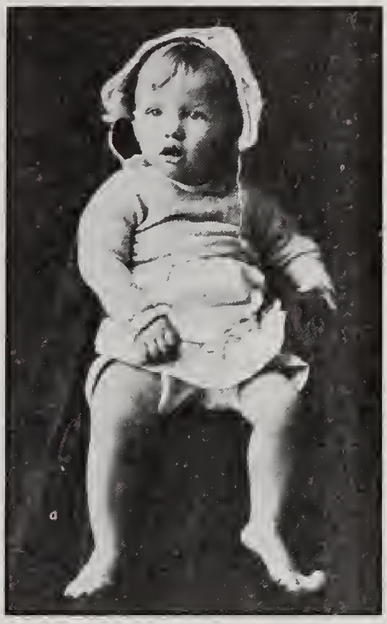
I now present him to you.

Corinth Reading Club

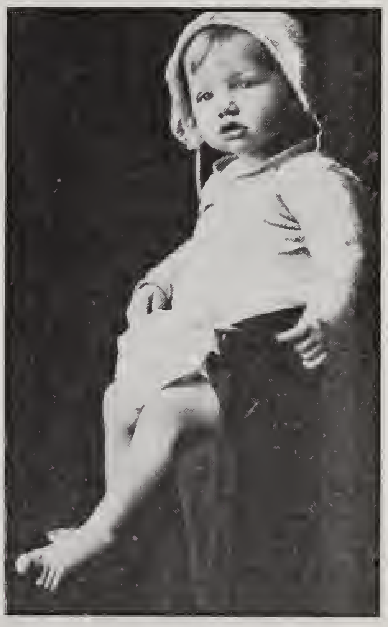
CONGENITAL ANOMALY

Greatly Enlarged Second Toe, Left Foot

S. A. S. age 13 months, white female with



two brothers and two sisters all of whom as well as parents and other relatives have no defects. Treatment: amputation by disartic-



ulation at the metatarsophalangeal junction was required to allow a shoe to be worn.

S. A. H.

Review of *The Journal of Pediatrics*

By Dr. R. B. Warriner, Jr.

A COMPARATIVE STUDY OF AGGLUTININ RESPONSE AFTER PERTUSSIS VACCINATION WITH THE SAUER VACCINE AND WITH A TOXIN VACCINE AND IN UNTREATED CLINICAL PERTUSSIS

Lucy Mishulow

New York, N. Y.

Recent studies on pertussis have varied widely but lately have been more encouraging. Madsen, in a controlled investigation on the Faroe Islands, found that there was a definite reduction in incidence and a marked decrease in mortality due to pertussis vaccine. The difference of opinion at present is in the optimum method of preparing pertussis vaccine and the total dosage that is used. The dosage formerly was 10 to 15 billion bacteria. Sauer himself has trippled his dose and recommends that 80 to 90 billion bacteria be given. The intra-cutaneous method of administering the vaccine has given very promising results and may prove to be the method of choice if further tests will confirm the present findings. The dosage is required for the vaccine in such a manner that it contains a toxic substance in addition to the bacteria. Consequently, where the Sauer vaccine dose has been about 2 cc., the dose now is considered to be from 8 to 11 cc., or 100 billion bacteria.

Review of *The Journal of Pediatrics*

By Dr. R. B. Warriner, Jr.

SURGICAL PEDIATRICS

Herbert E. Coe, M.D.,

Seattle, Wash.

The author recognizes a wide difference in the adult and the child in regard to reactions, growth factors, psychology, tissue structures, physiologic requirements and pathologic processes. Thus, such terms as pediatric attitude have a definite meaning. Among other things he discusses "anesthesia" and believes that individualization of anesthesia is particularly important and relatively easy to accomplish. Avertin, the barbiturates, cyclopropane, and the preanesthetic medication have all been used much more frequently of late. Cyclopropane is steadily gaining in favor. There is less post-operative nausea, vomiting, distention, and general discomfort than with any other type of anesthesia. It can be used in nearly all types of cases including many bad risks and it almost entirely avoids the unpleasantness of either. At the Mayo Clinic it is rapidly replacing ethylene which for several years has been rather extensively used.

It does require a skilled anesthetist, and special apparatus, and the cost still remains rather high, being $1.14, averaged per case. Pediatricians have developed the wide use of basal anesthesia or narcosis. Children tolerate the barbiturates well and a good operative routine is: (1) nembutal 30 to 40 minutes before operation either by mouth or rectum, (2) patient moved with gentleness, (3) supplemental ether, (4) inducted by ethylene and oxygen, (5) and followed by carbon. This sequence is considered the best for children as well as adults for the majority of cases. But for short simple anesthesia, the barbiturates have come widely to the forefront.

They are of two types—heavy and light—, nembutal and sodium amytal being examples of the former; and evipal and pentothal sodium examples of the latter. The *former* objection to intravenous and rectal anesthesia, that it is not controllable, has been met by the light barbiturates. They are excreted rapidly so that only a trace remains in twelve hours and the effect passes in from 3 to 30 minutes, depending on the dose. Thus, they are controlled since the effect is on the respiratory and not the cardiac centers, and since respiratory stimulants and artificial respiration can easily be used until the effect has entirely disappeared, if there should be an instance of idiosyncrasy to the drug. Intravenous administration is generally used and induction is smooth, pleasant, and rapid. The dose for children is in proportion to the weight, based upon the average adult weight of 150 pounds. Basal anesthesia using the barbiturates is fast replacing morphine for preanesthetic medication.

The intravenous use of evipal has been so extensively and favorably reported that further comment seems superfluous. In one series of 120 cases many children were included, one of whom was an infant, 8 months old, in whom 140 mg. were used for a ten-minute anesthetic. Coramine is a true physyiologic antidote for the barbiturates, being distinctly superior to ephedrine or adrenalin. It can be given intravenously in doses 2 to 5 cc., repeated every ten minutes until effective. For pre-anesthetic medication sufficient time should be permitted to elapse for the full physiologic effect to be obtained before the supplemental anesthetic is administered as, otherwise, a combined action may occur with rather alarming respiratory depression which can be easily overcome by the coramine.

They are contraindicated in the very septic cases and where there is respiratory obstruction.

AMERICAN JOURNAL OF OBSTETRICS AND GYNECOLOGY

32:498, 1936.

A New Rapid, Economical Test for Pregnancy, and Certain Gynecologic Conditions.

G. C. Gilfillen and W. K. Greeg.

This test is based on the supposition that pregnant women are not sensitive to the anterior pituitary-like substance in the urine of pregnant women. The tests were made by intradermal injections of two minims of fresh antuitrin-s, which has been kept in the ice box, in the ventral surface of either arm. The reaction to the injection is read in ½ hour and if only a slight reaction present, wait another half hour before making conclusions. a pregnant woman will not react to antuitrin-s. A non-pregnant woman will react to antuitrin-s.

The test is usually negative when live decidual cells are retained in the uterus. This test corresponds with the Aschheim-Zondek test in malignant diseases. B. P.

THE JOURNAL OF BONE AND JOINT SURGERY

19:1 January, 1937.

UNITED FRACTURES TREATED BY BONE DRILLING

E. R. Easton, M.D., and Pro. V. Prewitt, M.D.
New York, N. Y.

Nine case reports of delayed or non-union embracing fractures of the tibia, neck of the femur, and upper extremity of the humerus are presented to show that drilling satisfactorily stimulates union.

"The chief advantages of the drilling operation, as observed by the authors, are: (1) it creates an aseptic inflammatory process which increases local circulation; (2) pulverized bone is deposited within the fracture area; and (3) the viable cells promote the formation of so called "bony callus."

"In the presence of active inflammation, the operation is contra-indicated, and should not be performed until it subsides. No other contra-indication has been observed."

S. A. H.

TRI-STATE MEDICAL JOURNAL

Shreveport

9:4 January, 1937 p. 1770

ALLERGIC DYPEPSIA?

David M. Pipes, M.D.
Shreveport, La.

In a survey covering several reviews of large numbers of patients, the author finds food allergy to be a factor in the cause of dypepsia in different percentages varying with the different groups but approaching one-third of the patients. He intends the study to place before the interrist another factor in his search for causes of disorders of the stomach. His own survey covers 700 persons and 161 or 23 per cent of the total described various dyseptic manifestations overdue to a known food or foods. Fifty-three or 33 per cent described other definite positive family history of allergy.

Conclusions

1. Approximately 33 per cent of all persons in apparent good health of indigestion.
2. Of this number approximately 71 per cent are coginzant of a definite cause and effect relationship between a food or foods and their dyspepsia.
3. Food allergy is probably an important element in the composite etiology of dyspepsia. S. A. H.

ANNALS OF SURGERY

January, 1937

MORTALITY IN ACUTE APPENDICITIS

F. W. Bancroft, M.D.
New York, N. Y.

Study of government mortality report from 1911 to 1925 indicated an alarming increase in mortality in acute appendicitis immediately following the World War. The author explains this on the basis of the fact that physicians who had short, inadequate courses in preparation for war surgery continued to do surgery in their private practice after 1918. More recent figures for the past twenty years indicate the mortality in the large surgical clinics have remained about the same, ranging from 3 per cent to 5.5 per cent, whereas the figures for the entire country have increased. Thus we may assume the higher mortality may be found in the small hospitals and towns.

Mortality according to peritoneal reactions indicate that the cases operated early, almost all survive, whereas the figure rises rapidly if the case is delayed until abscess or peritonitis occurs.

In the treatment of peritonitis the delayed operation or Ochsner treatment is strongly emphasized. This treatment consists of fluids intravenously, fomentations to the abdomen, complete rest of the gastro-intestinal tract, Fowler's position. Love, a strong advocate of this type of treatment in England, states that after employing the Ochsner treatment his mortality figure was reduced from somewhere between 15 to 65 per cent to 6 per cent. Also that 65 per cent of those surviving convalesced without an immediate operation, 25 per cent formed localized abscesses which were drained, and only 10 per cent had to have an emergency operation during the course of the disease. Stocton reports 113 cases with peritonitis of which 31 had immediate operation with a mortality of 42 per cent and 82 had delayed treatment with a mortality of 8.5 per cent. In this series the more severe cases were given the delayed operations while those operated were thought to have the better prognosis.

After a study of the many factors influencing the rising mortality figures in acute appendicitis the author suggests improvement by first, educating the public as to its dangers, second, early diagnosis and hospitilization, third, higher standards of surgery and thus better qualified surgeons, fourth, improvement of methods of treatment in cases of abscess and generalized peritonitis.

J. T. D.

THE SOUTHERN SURGEON

April, 1936, Vol. V, pp. 141-152

SURGICAL MEASURES FOR THE PREVENTION OF GAS GANGRENE

Guy A. Caldwell, Shreveport, La.

The author reviews 19 cases of gas gangrene with ten deaths and states that with proper management, eight of the ten deaths might have been prevented and six of the nine amputations might have been avoided.

Summary

1. A series of 19 cases with 10 deaths is presented and analyzed to show the errors resulting in a high morality and amputation rate.
2. Deaths and amputations from gas gangrene can be greatly reduced by proper surgical measures.
3. To be effective, these procedures must be applied shortly after injury or early in the course of the disease.
4. Most important of the operative measures are:
   (a) Removal of all foreign bodies.
   (b) Excision of dead and dying muscular tissue.
   (c) Creation of aerobi condition in the wound by leaving it wide open.
5. The use of suitable splints rather than plaster for fixation of compound fractures, in order to make frequent and careful inspection of the wound.
6. The antiseptic solution employed as a dressing is relatively unimportant, provided the wound has been made sufficiently large and left wide open.
7. Perfrigingen antitoxin is a valuable prophylactic and therapeutic adjunct, but in no way displaces proper surgical measures.

S. A. H.

HARRISON-STONE-HANCOCK COUNTIES MEDICAL SOCIETIES

The following resolution was drawn up, passed and a copy to be sent to the Family and *The Mississippi Doctor,* to express the sympathy for the loss of their former member.

Whereas: The wisdom of an Imnipotent Power has removed from our midst, our friend, colleague, and co-worker, Dr. W. A. Dearman and

Whereas: Dr. Dearman was a faithful, hard working scientific physician, and always stood for, and worked for organized medicine.

He was a member of county and state, American Medical Association and Southern Medical Association. A member of the American College of Physicians and was a past president of County Medical Society and State Medical Association and he was also an ex-member of the State Board of Health.

Whereas: He was an excellent citizen, standing always for the right progress.

Therefore: Be it resolved that the members of the Herrison, Stone, Hancock Counties Medical Society feel keenly his loss and advice and we bow in submission to the will of the Almighty, and

BE it further resolved that a copy of these resolutions be spread upon the minutes of the society and that a copy be sent to his mother, Family and *The Mississippi Doctor.*

D. J. Williams, Chairman
E. E. Parker, Chas. LeBaron, Com.

The following officers for 1937 wer elected:

President: E. B. Van Ness, Gulfport, Miss.; Vice-President: W. W. Lake, Pass Christian, Miss.; Secretary-Treasurer: D. L. Hollis, Biloxi, Miss.; Delegate to State Meeting: George Wallace, Biloxi, Miss.; Alternate Delegate: Charles Le Baron, Gulfport, Miss.; Board of Censors: Drs. Burnett, and Hollis, Biloxi; Dr. McWilliams, Gulfport; Medical Defence: Dr. E. C. Parker, Gulfport, Miss.

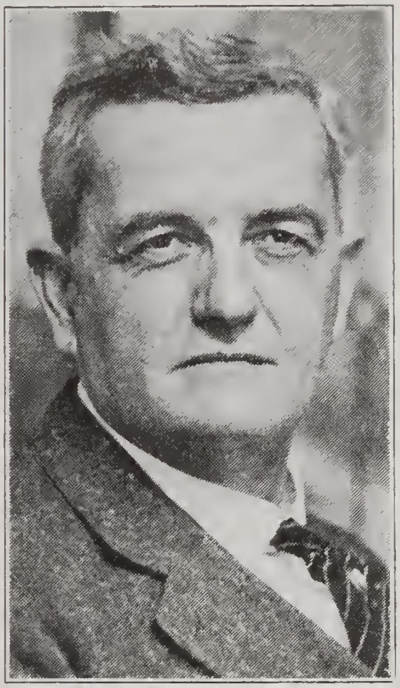
The medical library of the late Dr. A. J. Weissinger, Hernando, has been presented to the medical school at the University of Mississippi, it was announced recently. The collection contains 217 books and 75 volumes of journals.

Included in the valued collection are two sets of medical encyclopedias, recent texts, monographs and journals. Of special value are several volumes of the "Transactions of the Mississippi State Medical Association."

"I consider that in giving the books to the medical library I am placing them where they will be of greatest service to the doctors and students of the state," Mrs. Weissinger said.

This is a most commendable deed on the part of Mrs. Weissinger. This fine collection of books will continue to serve a fine purpose. We love our medical school at Ole Miss. We should help it every way we can.

Dr. W. V. Davis



We are assembled tonight in our regular monthly meeting, the first Monday night in the month. We have a vacant chair. It is the chair of a former president of our county society. It has become vacant since our last meeting, the exact time being the afternoon of March the 7th. The dean of our staff is no more. His presence always made jokes which never failed to come as a match for any that might be told. He had the happy faculty of being joyful, pleasant or sympathetic as good taste might indicate. His discussion of papers and case reports were always very instructive and helpful. He brought light and accurate information from his actual experience of forty six years. They were always evidence of deep thought, keen observation and proof sure of one of the most relative minds this country has ever known. The chair is not only vacant, but the atmosphere is different, there is a stillness, there is a sadness. We feel deeply the going of Dr. W. V. Davis. He enjoyed a very large general practice. To it he was deeply devoted, "this one thing he did." He was "ever ready." At a minute's call you could find him or find where he was. His case was kept in readiness, his span of horses in the earlier days were kept fit and fine, in the later years his car was full of gasoline to the brim. He was always sympathetic and considerate of deserving people who needed help, who needed his services. He was ethical with his fellow doctors. To his family he was true and devoted. He was the Christian citizen who always felt the pull of duty. He was a native of Prentiss county. In its progress he did his part well. By his profession he was revered and respected, by the people he was loved and trusted.

With grateful hearts for our association with this great personality, for his good cheer, for his exemplary life, for his information and wisdom, with sadness and regret at his departure, we offer our deepest sympathy to his splendid and cultured wife and his two noble and successful sons.

Prentiss County Medical Society, Assembled in regular monthly session at the North East Mississippi Hospital, April 5, 1937.

Committee: W. H. Anderson,
W. W. Strange,
R. B. Cunningham.

Dr. Peyton Fuqua

The cut above is the likeness of Mr. Peyton Fuqua, who lives a few miles from Amory Mississippi. Mr. Fuqua is probably the first man in his section of the state who ever underwent an operation for a condition diagnosed as appendicitis. This operation was done at his father's residence some four miles out of Amory, early in April 1897. It was done by Dr. G. S. Bryan who was assisted by Dr. I. P. Burdine, who then resided at Smithville, Mississippi. Neither of these men had ever seen an appendectomy done, both having graduated before appendicitis was recognized as a surgical condition. On opening the abdomen it was found that a gangrenous diverticulum was giving the trouble. The diverticulum was about the size of, and resembled, a medium sized banana. This was removed, the abdomen closed without drainage and the patient made "an uneventful recovery." Mr. Fuqua has enjoyed good health since his operation and has been unusually successful in his farming enterprises. He was about eighteen years of age at the time of operation.

Dr. Joseph I. Mitchell was rated high in the respect and affection of his fellow practitioners because of his unusual skill as an orthopedic surgeon and his high conception and application of professional standards. The general public held him in esteem not only because he was an able man of medicine, but also for his civic-minded attitude, his willingness to take constructive part in community enterprises that tended to make Memphis a better place to live. He was also one of excellent achievements as teacher and writer and his promise was even greater.

For all that, however, those who knew him best and loved him most were the children at the Crippled Children's Hospital and the older folk at the Hospital for Crippled Adults. Dr. Mitchell spent himself in their service by day and by night, in season and out, and they knew from their own experience how kindly, human and sympathetic was the spirit of the man who was so skilled and dexterous in healing their hurts and lessening their pain. He poured balm on vexed and disturbed souls even as he gave surcease to physical suffering.

That one who owned and exercised such talents should have been taken by death in the real youth of his potential period of accomplishment is one of those mysteries that evade solution by the finite mind, but there is no doubt of the monument of unselfish service he had already built for himself.—Commercial Appeal.

We all deeply regret the early going of Dr. Mitchell. He was able, thoroughly trained and his heart was in the work.—Ed.

MISSISSIPPI STATE MEDICAL ASSOCIATION
and
COMPONENT SOCIETIES

An Improved Malarial Treatment

LEON B. AUSTIN, M.D.
ROSEDALE, MISS.

The improved malarial treatment, hereinafter to be referred to as "The Chemopathic Treatment" represents a development of many years.

Publication of its nature and efficacy had been withheld until its superiorty could be demonstrated on at least ten thousand cases.

But when malarial incidence in the malarial belt of the United States (as well as throughout the tropical world) began to assume the aspect of a grave menace once more, both as to vastly uncovered prevalence and its unusual malignant character we were moved to present the facts without delay.

At any rate, our chemopathic treatment has already been applied to some seven thousand cases of malaria of all types prevalent in this country during the last ten years or more. Collaboration in its successful development, however, was restricted to less than a score of selected physicians.

The chemopathic treatment of malaria, as will be shown, differs from older treatments in many ways. It is, for instance, as much concerned with fortifying and rehabilitating the host's vitality and resistance as with eradicating the offending parasites from his system.

As a whole, however, the treatment was conceived and devised in the hope of lessening, if not altogether overcoming some of the shortcomings of the existing malarial therapeutics, such as:

(a) acute infections too frequently becoming chronic,

(b) chronic infections too often resisting recovery,

(c) the too heavy death rate,

(d) the too frequent susceptibility to serious metastases, and secondary infections,

(e) the too long drawn out invalidations and idleness, and,

(f) resultant heavy economic burdens.

As evidenced by our clinical reports our hopes have been largely realized.

The Nature of the Treatment

The chemopathic treatment of malaria consists of the joint use of,

1. Intravenous Medication,
2. Oral Medication,
3. Dietary Regulation,
4. Physiotherapy.

1. *The Intravenous Medication:*

The superior results obtained by the chemopathic therapy were largely due to the two venous injections used, one being the specific one, known as the Gr. II Injection, the other an auxiliary injection, known as the Gr. I, of indispensable value in the more chronic manifestations, and their sequelae.

Both injections are dispensed in sealed, sterile 20 c.c. ampoules, which if guarded against the action of direct sun light and excessive temperatures, will keep indefinitely. Unsealed, the injections decompose in a short time.

In both injections, 20 c.c. constitute a maximum adult dose, children's dose, 2 to 3 c.c. per ten lbs. weight.

Under proper technique both injections are painless. If the solutions are carelessly dragged into the perivenal tissues no sloughing results, but intense discomfort.

The injections are administered with an all-glass syringe, preferably of the eccentric type with needle attached, preferably one of 23 to 25 gauge and 5-8 to 3-4 inch length.

Both injections should be given slowly.

The Gr. II Injection

The Gr. II injection is composed of a finely balanced isotonic aqueous solution of the salts of quinine, arsenic, iron, manganese and calcium. It is not to be rediluted.

The composition of the Gr. II injection reveals its high tonic and reconstructive value.

Reactions:

The reactions of the Gr. II injection are almost invariable and, therefore, predictable. They rarely survive the injecting period itself. Being rather unusual and startling (though harmless) in character, patients are to be prepared for them before the initial injection.

The reactions consist of intense heat sensations first felt in the cranial region and throat. Thence they diffuse throughout the entire body, lastly settling in the genitals and the anal region.

In order to avoid a cumulative effect of these reactions, the injection is to be given very slowly.

Close to one hundred thousand injections have been administered without a single misadventure.

Contra-Indications:

Gr. II injections are contra-indicated in ascertained idiosyncrasies to quinine and in pregnancy.

The Gr. I Injections

The Gr. I injection has proved of indispensable auxiliary value in connection with its companion injection in the treatment of the obdurate chronic types of malarial infections and the grave sequelae thereto. Its value probably derives from its observed facility of disorganizing and resorbing abscess walls and encapsulating materials of encysted parasites, thus exposing the liberated plasmodia to the specific action of the Gr. II injection, which, in the regular routine of treatment invariably postcedes the G. I injection by from 12 to 24 hours.

The Gr. I injection is an aqueous, isotonic solution of the iodides, the hypo-iodates and the guaiacolates. It is not to be rediluted.

Reactions:

The reactions are those of a modified iodism; coryza and malaise. Nearly one million of this injection has been administered without a single misadventure.

Contra-Indications:

The Gr. I injection is contra-indicated in ascertained idiosyncrasies to iodine (sea foods), in the hemorrhagic type of tuberculosis and in acute appendicitis.

2. *Oral Medication:*

The principal oral medication recently used in the chemopathic treatment of malaria, is a solution, introduced as Chin. Fer. Chlor. (Kersch), a compound of the chlorides of quinine, iron, manganese, kalium and calcium.

This solution is well tolerated and free from the usual objections associated with other inorganic iron medications, such as digestive disturbances, and dental discomforts and deterioration.

It is dispensed in a 10 per cent aqueous or alcoholic solution in doses of from 10 to 20 drops, three times a day, one to two hours before or after meals, followed by copious water intake. If kept tightly corked in a dark, cool place, it will keep intact a long time.

Contra-Indications are the same as those governing the Gr. II injection.

Incompatibles:

Citric and tannic acids.

Whenever compelled to treat malarial infections without the use of the injection we found in this solution a more dependable and constructive substitute for other quinine preparations.

Any definite prophylactic value of this remedy as to malarial infections or re-infections has yet to be determined.

Source of Supply

No commercial exploitation of the three enumerated medicaments was authorized or permitted. They were not purchaseable in the open market, nor are they now. Their use was solely confined to the collaborating group of physicians who assisted in the development of the chemopathic treatment. Manufactured for a large clientele, their cost of production and distribution would form no barrier to their generalized use.

3. Dietary Regulation

"Dietary straight-jacketing" of malarial patients was not resorted to; nor seemed it wise or necessary, save in the management of far-advanced bed-fast cases. Certain articles of food merely, found to have retarded convalescence, were excluded. They were chiefly the superheated animal fats (butter fat not included), the soft, soggy, starchy foods, such as fresh breads, doughnuts, macaroni, and their variants, egg-whites heated to solidity, and polished rice. The balance of the dietary regime was regulated to conform with the general rule of "a maximum of nutrition within a minimum of bulk."

4. Physio-Therapy

Among the various forms of physical therapy employed, artificial diaphoresis and diathermic heat were found of outstanding benefit in many of the old complicated chronic cases.

Many of them were found to be afflicted with almost total anaphoresis, interfering with the full benefits of the chemopathic treatment; when they failed to respond to the diaphoretic action of the Gr. II injections, semi-weekly artificial diaphoresis was resorted to, preferably timed with the Gr. I injections. Heat rays were employed for that purpose.

Diathermy was found to be of considerable assistance in cutting down the length of the treatment periods of those suffering from stubborn old splenic and hepatic involvements in particular. The diathermic treatments, too, were timed with the Gr. I injections. The best results were seemingly obtained when the central heat was held to approximate the thermometrical equivalent of about 105 degrees Fahrenheit for from 15 to 30 minutes.

Treatment Schedules—Acute Malaria

The intensity of treatment has to be adjusted, of course, to the type of malarial infections under treatment.

Strictly acute infections often respond to two to four injections of Gr. II without recurrences.

Most of them, however, required more of these injections before the microscopic findings became and remained negative, seemingly confirming our doubts as to the ability of these injections to dispose as readily of the plasmodial sporozoid and gamete cells as of the fully developed parasites.

Accordingly six semi-weekly Gr. II injections were the rule and resulted in full recoveries of most of the fresh acute incidences of malarial infections. Throughout the entire treatment period many of these patients received orally 10 to 20 drops of the Chin. Fer. Chlor. (Kirsch). Patients living in the malarial belt were advised to continue the use of this preparation throughout the malarial season.

Uncomplicated Chronic Malaria

Uncomplicated chronic malarial infections of the usual intravascular type responded readily as a rule to a single course of four or five weeks of the following treatment schedule:

Monday (say) Gr. I injection
Tuesday Gr. II injection
Thursday Gr. I injection
Friday Gr. II injection.

Only in isolated instances was it necessary to repeat the course following an intermission of four to five weeks.

Additionally the patient received 10 to 20 drops of the Chin. Fer. Chlor. (Kirsch) during the entire treatment period and most generally for a considerable time thereafter.

Complicated Chronic Malaria

Complicated chronic types of malaria, types displaying extra vascular involvements, splenic, hepatic and central, such as paralysis, mental disturbances, nocturnal epilepsy, etc., and associated with more or less marked vascular deficiencies received the same schedule of treatment extended, however, to six or seven weeks. Repeated courses were the rule rather than the exception in these grave malarial infections with intermissions of not exceeding five weeks between.

Per orem: 10 to 20 drops of Chin. Fer. Chlor. (Kirsch)..

Complete recoveries were the rule.

Our records reveal some remarkable recoveries as a result of the chemopathic treatment.

Our most desperate cases had passed through other clinics before reaching us. Invariably their malarial origin had been overlooked. A number of them had been diagnosed and treated for syphilis, due, no doubt, to their positive Wassermann reactions, so frequently associated, too, with certain types of malarial infections.

In the vast majority of cases we succeeded in unearthing a malarial history, the original acute inceptions dating many years back as a rule. In one patient forty years back. Although he displayed symptoms of far-advanced pernicious anemia, he recovered under the chemopathic treatment. In a few of these cases the plasmodia were still recoverable.

Thus we find Prof. Mucha's (Vienna) contentions contained his monograph on malarial hepatic metastases strangely verified. He stated that the sequelae of malarial infections were as long deferred at times, as variegated and almost as dangerous as those of luetic infection. (Note the appended history of a cirrhosis of the liver case, recorded by Dr.

Harry J. Newell, of Alexandria, Nebraska.)

Our clinical experience covers many laboratory diagnosed cases of pernicious anemia, which we succeeded in tracing back to a malarial etiology. Under the chemopathic treatment all but two recovered, some of them originally on the verge of death. (In this connection note the case history of a patient furnished by Dr. Porterfield, on the concluding page of this treatise. At this writing (April, 1936) the patient is still holding down his job.)

Collaborators: Drs. L. B. Austin, Rosedale, Miss.; A. C. Boie, Fort Morgan, Colo.; G. P. Bridges, Paragould, Ark.; L. E. Bunte, Marshall, Mo.; H. M. Cobb, Hugo, Colo.; L. I. Farmer, Somerset, Ky.; G. Funderburk, Winnsboro, La.; Don H. Hinckley, Chicago, Ill.; Paul Kersch, Rock Island, Ill.; Harry J. Newell, Alexandria, Neb.; W. E. Owen, Cedar Rapids, Iowa; E. M. Planck, Kansas City, Mo.; F. W. Porterfield, Waterloo, Iowa; LeRoy Willis, Bevier, Ky.; C. H. Young, Little Rock, Ark. *Deceased:*—Drs. W. W. Bailey, Davenport, Ia.; Thad Cothern, Jonesboro, Ark.; E. P. Rice, Chicago, Ill.; J. W. Stiers, Detroit, Mich.

CIRRHOSIS OF LIVER

Mr. C. W. Farmer, 36 years old.

Came to us July 25, 1928; was very much discouraged. Had been under care of good men in various parts of the state. Was dismissed from Mayo's Clinic some few weeks before coming to us.

Had a marked loss of flesh. Very jaundiced, enlarged spleen. Every evidence that diagnosis of former men was correct, that of "cirrhosis of liver."

We began at once with diathermy, wiring one of our collaborators for counsel, who suggested a malarial etiology and followed the line of treatment laid down by him. Diathermy alternating Monday and Tuesday, Thursday and Friday, with indicated chemopathic treatment.

Tests proved inactive liver masked serious symptoms

After three weeks' treatment with diathermy and intravenous medication, improvement began, he slowly regaining the use of his legs; was able to drive his car and walk somewhat. Mental condition improved. Able to sleep. Jaundice slowly disappeared. Heart action much better, appetite good.

Four months after, liver showed from "white cell count and milk test" to be performing its natural functions.

He was discharged after five months and sent to his home in northern part of the state on January 1, 1929.

He is at present employed in a cream station doing a full day's work, *happy* and *well.*

This we consider to be one of our greatest victories with chemopathic treatment.

DRS. NEWELL & SCHAFER,
(Signed) Harry J. Newell, M.D.,
Alexandria, Nebraska.

PERNICIOUS ANEMIA

Another Recovery Under the Kersch Treatment

J. F. H., locomotive engineer, first seen July 6th, 1930. Patient bed-fast, partly unconscious and lethargic, cold, clammy, very pale. Eyes dull, pulse faint and rapid. Previous diagnosis, rectal carcinoma with hepatic metastasis and cachexia. A mass was found finger high above anus, no hemorrhages. Patient admitted to St. Francis Hospital.

July 6th, Blood Count: *Hemoglobin 10 per cent. Red Cells* 1,500,000; white cells 8700 with abundant macro-and microcytes.

Diagnosis: *Pernicious Anemia,* definitely established as of malarial origin: *Chemopathic treatment* instigated.

July 24th, Hemoglobin 15 per cent, Reds 2,250,000.

Aug. 14th, Hemoglobin 30 per cent, Reds, 3,120,000.

August 30th, Hemoglobin 34 per cent, Reds, 3,650.00.

September 15th, Hemoglobin 58 per cent, Reds 4,000,000.

October 10th, Hemoglobin 88 per cent, Reds 4,560,000.

October 25th, Treatment had been discontinued. Patient resumed usual occupation.

April 4th, 1931, patient still operating his engine; feeling fine.

Final Blood Count: Hemoglobin: 90 per cent —Reds 4,950,000. (July 6th, attending physician had given patient less than a week to live).

FRANK WM. PORTERFIELD, M.D.
Waterloo, Iowa.

An Evaluation of the Clinical Manifestations of Hookworm Infestation in Children*

ALVIN E. KELLER, M.D.‡
NASHVILLE, TENN.

About twenty-five years ago when the Rockfeller Sanitary Commission conducted its investigations in the southern United States it was found that hookworm disease constituted an important public health problem. The clinical manifestations were severe enough to warrant vigorous control measures as the disease was prevalent in a large proportion of the population. Since that time, however, control measures have been continued and recent studies have shown that there has occurred a marked decrease in the incidence of hookworm in the population groups examined. The recent investigations have also revealed the fact that about 75 per cent of the positive cases, based on egg-count examination of the feces, could be classified as very light or light infestations which are not likely to produce clinical symptoms.

In Mississippi in 1934 it was shown, from the examination of 44,380 specimens of feces obtained from white persons residing in 52 counties of the State, that there has occurred a decrease in the incidence of hookworm from 53.1 to 19.6 per cent or a total decrease of 62.5 per cent since 1914 (Keller, Leathers and Ricks, 1934). The present clinical study was conducted to evaluate the effects of hookworm infestation on the health of white rural school children (5 to 18 years) in George County, Mississippi, where soil, climate and environmental conditions were satisfactory for the transmission of the parasite.

Plan of Study

The investigation was planned so that a representative group of school children in the area would be included in the study. The total number of children examined was 1,083, which is approxmiately 59 per cent of the total school population. For each child a medical history and dietary data were obtained. A complete physical examination was also made, together with studies of the blood and feces of each individual.

The blood studies included a red blood cell and leucocyte count and a differential white blood cell count based on the examination of 200 white blood cells stained with Wright's blood stain. The hemoglobin determinations were made with Sahli hemoglobinometers standardized to be read in grams of hemoglobin per 100 c.c. of blood. A stained thick drop preparation was also examined for the presence of malaria plasmodia in order to rule out a condition which may produce clinical manifestations similar to those of hookworm disease. Only those individuals found not to have malaria parasites at the time of examination were included in the study.

A specimen of feces was obtained from each person. Each specimen was examined by both the salt flotation method and the Stoll egg count technique. In this study children found to have only hookworm eggs in the feces are classified as positive cases. Those in which the salt flotation examination was positive but the egg count negative are grouped with those cases having light infestations.

Of a total of 1,083 children upon whom the above procedures were carried out, 222 or 20.5 per cent were found not to have hookworm eggs in the feces by both the salt flotation and egg count examinations. This group was considered as a control series. They lived in the same families and under the same environmental and dietary conditions as those who were found to have hookworm.

Results of Examination of Feces

In this series of 1,083 examinations, 861 or 79.5 per cent of the individuals were found to harbor hookworm by the salt flotation method and 635 or 58.6 per cent were found positive on egg count. This difference of 20.9 per cent more specimens found positive by salt flotation is accounted for by the greater efficiency of the salt flotation technique in detecting hookworm eggs in specimens of feces containing only a small number of eggs. The hookworm infestations found under these conditions are usually very light and are classified as such in the following analysis of the intensity of infestation.

These data reveal a high incidence of hookworm in the children studied. However, if only the incidence of hookworm is considered, an erroneous conception of the problem is obtained. It is only when the positive cases are analyzed according to intensity of infestation that the importance of hookworm as a public health problem can be measured. Table 1 shows the intensity of infestation of 1,083 specimens of feces together with the approximate number of hookworms and clinical classification in each intensity group.

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‡From the Department of Preventive Medicine and Public Health of Vanderbilt University School of Medicine, Nashville, Tennessee.

*Read before the Section on Hygiene and Public Health at the Sixty-Ninth Annual Session of the Mississippi State Medical Association, Greenville, May 6, 1936.

Table 1
Intensity of hookworm infestation in 1,083 white rural school children.

Intensity of infestation. Eggs er c.c. of feces	Approximate number of hookworms	Clinical classification	Number of positive specimens	Per cent of positive specimens
Negative	None	Negative	222	20.5
0– 699	0– 24	Very light	415	38.3
700– 2,599	25– 100	Light	259	23.9
2,600–12,599	101– 500	Moderate	161	14.9
12,600–25,099	501–1,000	Heavy	13	1.2
25,100 and over	1,001 and over	Very heavy	13	1.2
Total			1,083	100.0

Of the 1,083 children examined, as shown in the above table, 222 or 20.5 per cent had no hookworm eggs in the feces; 415 or 38.3 per cent had very light hookworm infestations; 259 or 23.9 per cent had light infestations; and 17.3 per cent had moderate to very heavy infestations. It is difficult to determine accurately at what level of hookworm infestation clinical manifestations are most likely to occur. If ,however, an intensity of 2,600 or more hookworm eggs per c.c. of feces or 100 or more hookworms is considered as the intensity level at which clinical symptoms are most likely to appear, it is seen that only 17.3 per cent of the specimens examined showed infestations of sufficient degree to produce clinical symptoms. The data show that even though the incidence of hookworm was high, a majority of the positive cases had light or very light infestations and that only one out of every five or six children examined had worm burdens to which clinical manifestations could probably be attributed.

Observations of Symptoms and Physical Findings

The observations which follow are correlated according to intensity groups based on the approximate number of hookworms in each group. Only those symptoms which are commonly associated with hookworm infestation are recorded. Table 2 is an analysis of the per cent of children in each intensity group who complained of fatigue, weakness, dyspnea and edema.

Table 2
The correlation of symptoms with hookworm infestation.

Approximate number of hookworms	Number in each group	Fatigue		Weakness		Dyspnea		Edema		Ground itch	
		Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Negative	222	31	14.0	31	14.0	28	12.6	12	5.4	76	34.2
0– 24	415	96	23.1	94	22.7	56	13.5	16	3.9	242	58.3
25– 100	259	70	27.0	66	25.5	58	22.4	6	2.3	172	66.0
101– 500	161	50	31.0	49	30.4	43	26.7	16	10.0	132	82.0
501–1000	13	8	61.5	8	61.5	7	53.8	4	30.7	11	84.6
1001 and over	13	9	69.2	8	61.5	7	53.8	2	15.3	8	61.5

In the control group a smaller per cent complained of these symptoms than in the group with hookworm. In the very light and light infestations there was some increase in the per cent of individuals with these symptoms. In the groups with moderate to very heavy worm burdens there was a more marked increase in fatigue, weakness, dyspnea and edema. These data indicate that there is a correlation between the worm burden and the symptoms usually associated with hookworm infestation.

Since it is usually considered that ground itch is a common condition found in hookworm areas, data relative to this point were recorded. It was found that in all groups a history of ground itch could be obtained. The per cent of children in each group from whom a history of this condition could be obtained varied from 34.2 per cent in the negative or control group to well over 50 per cent in those groups with hookworm infestation.

Table 3
Correlation of results of physical examination with intensity of hookworm infestation

Approximate number of hookworms	No. examined	Normal weight		Overweight		Underweight		Poor nutritional condition		Pallor of skin and mucous membranes		Diseased teeth		Diseased tonsils	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Negative	222	76	34.4	7	3.1	138	62.5	38	17.0	92	41.4	104	47.0	55	24.8
0– 24	415	156	37.6	20	4.8	242	58.3	85	20.5	163	39.3	183	44.1	103	24.8
25– 100	259	94	36.3	8	3.1	157	60.0	62	24.0	117	44.4	132	51.0	66	25.5
101– 500	161	45	27.8	1	0.7	115	71.5	51	31.7	86	53.4	76	47.2	30	18.6
501–1000	13	5	36.8	0	0.0	8	63.7	6	46.0	9	70.0	6	46.0	4	30.7
1001 and over	13	3	24.5	0	0.0	9	71.5	7	52.0	11	84.6	8	61.5	5	40.0

The observations relative to the physical examinations are shown in table 3. In analyzing the data relative to the weights of the individuals examined the standard chart of the American Child Health Association was used. On that basis only those children who were either 10 per cent above or below the weight for their height were considered underweight or overweight. One of the striking features of this analysis is the large per cent of individuals in each group who were found to be underweight. In the negative or control group 62.5 per cent were underweight; in the very light and light infestations 58.3 per cent and 60.6 per cent; and in the moderate, heavy and very heavy infestations from 63.7 to 71.5 per cent were found to be underweight.

There was not a great variation in the per cent of children who were of normal weight except in the group with very heavy infestations. For the entire group of persons examined only 35 per cent were normal weight, 62 per cent were underweight and 3 per cent were overweight. An impression was also gained that in the study as a whole a majority of the children were undersized. These data show that there was essentially the same per cent of underweight children in the light infestation groups as in the group without demonstrable hookworm. It is evident that factors other than hookworm are involved in causing or producing this condition in the area studied.

The data concerning the state of nutrition, based on clinical observations show that in the control group and in those children with very light and light infestations from 17.0 to 24.0 per cent were found to be in poor nutritional condition. In the groups with moderate to very heavy infestations from 31.7 per cent to 52.0 per cent were found to be poorly nourished. The data show that there was a correlation between the degree of infestation and the nutritional state of the individual. This was found especially in the moderate to very heavy infestations.

The examination of the appearance of the skin and mucous membranes revealed that from 53.4 to 84.6% of the children with moderate, heavy and very heavy infectations were apparently anemic. In the negative group 41.4 per cent and in the very light and light infestation groups 39.3 and 44.4 per cent respectively were anemic as shown on clinical examination. The data show that those children with the greatest worm burdens were apparently more anemic than those with no hookworms or with very light and light infestations. It should be noted, however, that even in those persons with no hookworm 41.4 per cent were classified as having pallor of the skin and mucous membranes. The same factors which are responsible for bringing about this condition in the control group are also probably responsible for, or are conducive to, an increase in the anemia in those groups with moderate to very heavy infestations.

It was found that throughout each group studied the per cent of individuals with diseased teeth varied from 44.1 to 61.5 per cent. As regards diseased tonsils, only those children in which the examiner was reasonably certain that the tonsils were diseased were recorded as such. In respect to this point it was found that essentially the same percentage of children were found to have diseased tonsils in both the group with and the group without hookworm. If diseased teeth and tontils can be considered foci of infection which may be responsible for the production of ill health, these factors were equally distributed throughout all groups.

Results of Blood Examination

Before discussing the results of the examination of the blood, available data for normal individuals in comparable age groups should be taken into account. For children of 5 years of age 4,500,000 red blood cells per cu. m.m. and 13.6 grams of hemoglobin per 100 c.c. of blood are considered as average normal levels. For children ten years of age 5,000,000 red blood cells per cu. m.m. and 14.4 grams of hemoglobin per 100 c.c. of blood are reported as normal average figures (Holt and Howland, 1935). An average total leucocyte count of 8,000 per cu. m.m. is considered normal for children of five and ten years of age.

Table 4
Average red and white blood cell counts, hemoglobin and eosinophil count according to intensity of infestation.

Approximate number of hookworms	Number examined	Red blood cells, millions per cu. mm.	Hemoglobin grams per 100 c.c.	White blood cells thousands per cu. mm.	Per cent eosinophils	Per cent with normal No. of eosinophils
Negative	222	3.445	10.1	7.70	9.6	36.0
0– 24	415	3.428	9.8	8.35	12.9	16.5
25– 100	259	3.471	9.6	8.69	13.0	12.0
101– 500	161	3.148	9.3	7.96	13.2	4.3
501–1000	13	3.190	7.6	7.54	17.9	8.0
1001 and over	13	2.857	6.5	8.32	13.8	15.0

Table 4 shows the average red blood cell counts, hemoglobin estimations, white blood cell counts and eosinophil counts for each intensity group. In the negative or control groups it was found that the average red blood cell count was 3,445,000 cells per cu. m.m. and the hemoglobin was 10.1 grams per 100 c.c. of blood. The figures are definitely lower than the figures given for normal children and indicate a secondary anemia. In the very light and light infestation groups the findings as regards the red blood counts are essentially the same while the average hemoglobin determinations are only slightly lower. There was no appreciable decrease in the red blood cell counts and hemoglobin estimation until an intensity of 100 or more hookworms was found, but those children having the heavier worm burdens were more anemic than those having either no hookworms or light infestations.

In individual cases in the control and light infestation groups there were anemias as severe as in the groups with moderate and heavy worm burdens. Eighteen per cent of the children in the control group had anemias as severe as those found in children with moderate and heavy infestations. These data indicate that hookworm infestation alone does not account entirely for the anemia, as the same degree of secondary anemia was demonstrated in a significant number of the children in each of the groups studied.

The average total leucocyte count did not vary materially from the average usually considered as normal for the age groups examined. There were only a few white blood cell counts above 10,000 per cu. mm., the highest being 18,700. Only seventeen counts were below 5,000, the lowest being 2,750.

The analysis of the differential leucocyte counts revealed normal findings for the age groups studied except in regard to the per cent of eosinophil cells. If an eosinophil count of less than five per cent is considered as a normal level for these cells it will be seen that in both the control and infested groups there was an increase in eosinophils. In the control or negative group the average eosinophil count was 9.6 per cent and only 36.0 per cent of the cases in this group had eosinophil counts within normal range. This may be accounted for either by assuming that in those individuals in whose blood the eosinophils were found to be increased there were hookworm larvae in the stage of migration or some other condition may have been present to account for this finding.

In the infested groups the per cent of eosinophils varied from 12.9 to 17.9 per cent.

No correlation between the degree of eosinophilia and the intensity of infestation could be demonstrated. Even in the groups with hookworm, from 4.3 to 16.5 per cent of the individuals had eosinophil counts which were within normal limits. The data emphasize the fact that while an increase in eosinophil cells is likely to occur in hookworm infestation its absence in individuals known to be infested with this parasite is not an unusual occurrence. Furthermore, the eosinophilia in some of the children with hookworm may have been due to some other cause.

Data Concerning the Diets of Individuals Examined

The data relative to the diets of individuals examined were obtained in a majority of the cases from the parents. Information as to the amount of each kind of food eaten was recorded for the foods ordinarily consumed, such as milk, cereals, meat and eggs, vegetables, fruits and additional vitamins, viz. cod liver oil, tomato juice or orange juice. Table 5 shows these data according to the degree of infestation.

Table 5
Dietary data showing relative amounts of different foods used in 1,083 school children examined for hookworm according to intensity of infestation.

Approximate number of hookworms	Number examined	Milk 1 %	Milk 2 %	Cereals 1 %	Cereals 2 %	Meat and eggs 1 %	Meat and eggs 2 %	Vegetables 1 %	Vegetables 2 %	Fruits 1 %	Fruits 2 %	Additional vitamins 1 %	Additional vitamins 2 %
Negative	222	33	67	40	60	38	62	10	90	32	68	98	2
0– 24	415	44	56	47	53	37	63	13	87	45	55	99	1
25– 100	259	42	58	55	45	45	55	12	88	58	42	100	0
101– 500	161	52	48	80	20	49	51	13	87	68	32	99	1
501–1000	13	71	29	93	7	50	50	7	93	72	28	100	0
1001 and over	13	71	29	86	14	50	50	21	79	58	42	100	0

1 indicates that none or only small amounts of the food were eaten.
2 indicates that moderate to large amounts of the food were eaten.
% indicates per cent of persons in each group.

These data indicate that on the whole the diets were not only inadequate in amount but were not properly balanced and that almost all of the children had not received additional vitamins or protective accessory food substances. It was found that the term "meat" did not as a rule imply beef, chicken or fish, though small amounts of these substances were consumed, but usually indicated the use of some type of pork, in most instances fat pork. It was also found that "vegetables" often meant not fresh green vegetables but dried beans or peas. One of the outstanding defects in the diets was a lack of blood forming elements which in all probability was an important factor in the production of the secondary anemia which was found in all groups examined.

Table 5 also shows that the diets were more inadequate with the exception of vegetables (dried beans and peas) in the groups with the heavier worm burdens. This was probably due to the poor economic condition of those sections of the county where the greatest worm burdens were found as in these parts of the couny the largest number of families were on direct relief. Poor economic conditions alone may produce malnutrition and anemia. Under these circumstances the effects of heavy hookworm burdens will be exaggerated. It should be emphasized that even though better diets prevail in the other areas of the county where the economic conditions were somewhat better they were not adequate.

Although hookworm infestation per se is conducive to bringing about anemia, it seems that since only 17.3 per cent of the 1,083 children examined had worm burdens sufficiently great to produce clinical symptoms other factors were also responsible for the anemia and malnutrition which was found to be present in all groups studied. It would appear that the dietary insufficiencies which have been indicated assume an important role in this regard.

Discussion

This study shows that there is a correlation between the physical condition of children infested with hookworm and the worm burden. This correlation is not striking, however, until the intensity level is such that the individual has 100 or more hookworms In these groups, as compared with the negative or control group and those children with very light infestations, there were more children complaining of fatigue, weakness, dyspnea and edema. The degree of these symptoms increased as the worm burden increased above 100 hookworms.

It was found that certain other conditions were prevalent in all groups examined. Outstanding among these were malnutritution, foci of infection in the teeth and tonsils and secondary anemia as determined by clinical examination and laboratory studies of the blood. The degree of anemia and the percentage of children underweight did not vary a great deal in any of the groups, except that those with heavy hookworm infestations had a more marked anemia.

The percentage of children in each group in whom diseased teeth and tonsils were demonstrated was essentially the same.

A study of the diets of the children classified according to intensity of infestation revealed for the group as a whole that the diets were inadequate in amount and improperly balanced and that practically all children received no accessory protective food substances, such as cod liver oil or orange juice. The diets on the whole consisted mainly of vegetables in the form of dried beans and peas, fruits, a certain amount of cereal, small amounts of milk, beef, eggs and green vegetables. The lack of hematopoetic substances represent the most outstanding defects in the diets in the children studied. This dietary condition was particularly evident in the group with heavy hookworm infestation. This fact can be accounted for, in part, by the poor economic conditions prevailing in certain sections of the county where most of the heavy hookworm infestations were located. Nevertheless, in those areas of the county where the economic conditions were more favorable there were also obvious deficiencies in the diet.

Although no particular dietary deficiency disease could be demonstrated it is probable that the individuals examined in this study were suffering from latent or subclinical dietary dificiences. These individuals in all probability were receiving small amounts of accessory protective substance in their regular diet which were sufficient to prevent the pronounced clinical syndromes which are associated with deficient diets but the amount received were not adequate to promote normal growth and nutrition.

Since only 17.3 per cent of the 1,083 children examined had hookworm burdens sufficient per se to bring about clinical manisfestations such factors as insufficient and inadequate diet and other physical defects which have been mentioned were just as important in producing the physical findings which have been enumerated especially in the negative group and the group with light infestations. In the groups with moderate and heavy worm burdens these factors would be conducive to increasing the anemia.

There is experimental evidence to show that if individuals with hookworm infestation were provided with satisfactory diets which contain sufficient hematopoetic substances the clinical effects of hookworm can be ameliorated (Rhodes, Castle, Payne and Lawson, 1934.)

Since the county studied was representative of the hookworm area of Mississippi the findings which are presented probably apply to the other rural sections of the State where hookworm is prevalent. Other studies have shown that the dietary habits of the southern rural white population are essentially the same from the qualitative point of view (Alexander and Meleney, 1935.) These dietary customs have existed in certain population groups of the South for many generations and unless a concerted and aggressive effort is made by official health agencies to correct these conditions it is probable that dietary deficiencies will continue to prevail. McLester (1935) has stated that "in the past, science has conferred on those peoples who availed themselves of the newer knowledge of infectious diseases better health and a greater average length of life. In the future it promises to those races who will take advantage of the newer knowledge of nutrition a large stature, greater vigor, increased longevity and a higher cultural attainment."

Conclusions

It is apparent that there is a high incidence of hookworm in the population groups studied but only 17.3 per cent of the children examined were found to have hookworm burdens of sufficient intensity to produce clinical symptoms. Other conditions, which include anemia, malnutrition, physical defects such as diseased tonsils and teeth, and unbalanced diets constitute a problem of major importance. The facts presented in this discussion show that attention should not be focused only on hookworm infestation as a cause of these manifestations of ill health and defective physical condition. All of the probable etiological factors should be considered in the evaluation of the physical status of rural white school children in the South. The improvement of diets, the removal of foci of infection and the correction of other physical defects, and the removal of hookworms are necessary to restore children to a normal state of well being.

The more wide-spread use of hematopoetic substances, especially iron, is essential in improving the nutritional status of individuals infested with hookworm. The use of iron is of definite value following hookworm treatment.

During the period when hookworm disease was exceedingly prevalent and the intensity of infestation wide-spread, it was necessary to emphasize treatment to obtain immediate relief from the marked clinical manifestations of the disease. It was, however, recognized that the control of excreta disposal constituted the most valuable measure to prevent infection and reinfection. Although this preventive measure was stressed the traditional custom of "soil pollution" was so well established that progress in providing sanitary methods of excreta disposal could only be gradually attained.

Results of recent investigations indicate that the control of hookworm disease should be considered as only one of the important activities in a well balanced public health program. This can only be obtained by an adequate full-time health service. This achievement is fundamental in maintaining the health of children on a sound basis not only in hookworm infested areas but also in all parts of the state. Obviously the active interest and cooperation of the medical profession in these problems will contribute greatly to their ultimate solution.

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Discussion

Dr. H. B. Cottrell (Indianola): Dr. Keller has brought us an excellent paper. It has given us a clear picture of the hookworm situation in George County as found through the survey of 1934.

I had the privilege of assisting in this survey and can therefore more nearly appreciate the thought and effort necessary to the presentation of the information that Dr. Keller has given us.

Although the incidence of hookworm disease in this area has greatly decreased there is still a large percentage of hookworm infestation. Because of the lack of sanitary facilities and the mildness of the climate which allows the children and many of the adults to go barefoot there is necessarily a high degree of infestation due to re-infection. One case that particularly impressed me was that of a ten year old boy who had been given treatment the year before. At the time he was examined by us he had typical lesions of "ground itch" on the palms of both hands and on both feet. On questioning it was found that the boy had been playing with an automobile tire that he rolled around the yard propelling it with both hands—rolling it close to the cape jasmine bushes, rose bushes, etc., in the yard.

Whereas this boy and many more like him were becoming constantly reinfected the intensity of the infestation would probably not reach the point of clinical hookworm disease for a long time.

With mass treatment of these heavily infected individuals and an improvement in sanitation clinical hookworm disease could be eradicated from this area. Lasting results will depend upon the degree of sanitation.

Dr. Keller has brought out the difference between hookworm infestation and hookworm disease. An infestation of less than 100 worms does not usually cause clinical hookworm disease. These light infestations do not show the marked anemia, poor physical development and mental retardation.

Dr. T. Paul Haney, Jr. (McComb): I will cut my discussion short because there is nothing I can add to this very excellent paper based upon a survey in George County made through the summer of 1934.

It is only in the heavy infestations that we as health officers are interested. However, we are interested in the carriers of the lesser infestations. Our attention must of necessity be focused on the heavily infested individuals and those insufficiencies in diet that cause both mental and physical retardation. This is a large problem and should have our best efforts.

I sincerely enjoyed my study of this paper and I feel that it was an opportunity for me and of more value to me than my discussion of it will be to you.

Dr. Keller has brought us some valuable information relative to hookworm disease in presenting this study. One of the points emphasized is that hookworm disease is still a most important problem. Many of us feel that since the work of the Rockefeller Foundation and the interest taken by it in hookworm disease that it has decreased and is no longer a major problem. Hookworm disease is still present in large numbers and I think many of the cases that have appeared mysterious could be so diagnosed. I think also that the intensity of the infestation is most important from a clinical standpoint, and from the standpoint of the patient it is important in the treatment of the case. Most important from the standpoint of the public health officer is the infestation itself. If we have one case we should consider every case from the standpoint of transmission of the disease.

There are two major points brought out in this paper. The first was brought out more or less and has to do with the physical examination of the child. Dr. Keller used as a basis for underweight that chart put out by the American Child Health Association. That is the best we have available at the present but we do not yet have the yardstick with which to say definitely that a child is over or under weight. I feel sure that we have a definite relationship between the amount of infestation and the child's weight. However, it did not show in that study. There was no difference between the negative child and the child with 1000 worms or more in from 62 to 71 per cent of cases. If we could say that any individual should weigh this particular amount I am sure that we would find in that category the same relationship that we find in the xzxzxzxz for of the skin 41 to 84. It is reasonable to think that the underweight would be affected also.

The second point of great importance is the management of the case. We cannot treat the individual case if we expect to control hookworm and with this in mind our State Board of Health has recently advised health officers to make not case records on hookworm disease but family records, and treat the family as a whole. When we do that we are going to examine all the members of the family and find other members of the family infected also. We must go beyond the family group and into the community at large where hookworm infestations are heavy and consider the cause of the disease. We must also consider just what was emphasized earlier in the paper—the nutritional state of all members of the family. We have seen that in all cases the diets were insufficient. It will not suffice us merely to order the diet for hookworm disease and pay no attention to the food these children or families are receiving. So, from a public health standpoint we must do what we can to improve the available food supply and make it conform as nearly as possible to the necessities of actual requirements. Also in studying the family as a group we are going to examine them thoroughly and find such other physical defects as diseased tonsils and teeth, and, as brought out in this paper, marked benefits will accrue when these are corrected.

When these things are done and we have carefully studied the whole group and provided some means of help to every home where a case of hookworm exists, we shall get somewhere.

I enjoyed this paper very much.

A MEMBER: I spent two weeks in George County two years ago in trying to help carry on this campaign. I went to the schools of the County. I have never forgotten the impression made upon me by those anemic and stupid children—some of them from good families. Their population is derived largely from the lumber camp people who have moved in there and intermarried with the natives and they have a rather careless, stupid population in George County and Greene County as well. As I recall now they have made a survey since then and there was something like 90 per cent infestation. I did my best to impress the importance of sanitation. They had an exceptionally good consolidated school, a nice building, but even with this splendid building the sanitary conditions were distressing. I tried to get the people interested in bettering these conditions—the club women and civic organizations, but I think the entire population was a little stupid and they did not seem to regard the importance of the matter. There were no sanitary conveniences whatever. They had fine water, wonderful springs, splendid facilities for sanitation but they went along in the old fashioned way and seemed perfectly satisfied. I did not especially stress dietary provisions because they seemed to be content to have bacon, cornbread and beans. They paid little attention to their gardens, lacking ambition in this as well as other lines.

I am so glad Dr. Keller has been there and made this survey and I hope that he can do something to help these unfortunate people because they have sounded the cry, "Come over to Macedonia and help us," and I am glad to know that the Macedonian cry has been heard and that they will have help.

Children who have hookworm disease are shackled. They cannot make normal citizens unless they have an opportunity to be rid of this infestation. I spent a week or two in Greene County and I had enough of Greene County. In one fine school there we found eleven cases of tuberculosis, and I think they must have had 95 per cent hookworm infestation. How can you build up a citizenship with these handicaps? I plead with you who are in charge of this work—go into these counties and help these people.

DR. F. MICHAEL SMITH (Vicksburg): Dr. Keller's presentation furnishes this section thought provoking facts on the subject discussed.

Our medical training was at a time and in localities where hookworm infestation and manifested handicaps to children when infected, were not taught or visualized. So our first surprising experience and knowledge of hookworm was obtained in Washington Parish, Louisiana, a number of years ago when we were sent there as a full time health worker.

In surveys of schools where white school children were attending, we found 66 2-3 per cent heavy infestation for all stools furnished, and many for lack of clear understanding or prejudices did not furnish stools. We noted a number of manifestations that Dr. Keller has called to our attention in this paper.

Departing from the trend of his discussion we are constraining to suggest, as we have on previous occasions suggested, that the health officer and his associates, in their efforts of control of hookworm should bear in mind that there are two routes of infection, direct and indirect; the direct, through fingers and toes and into the blood stream then to the lungs, then to the stomach and intestines; the indirect route, through fruit and vegetables eaten, that are grown in contaminated soil, where perhaps an E-type toilet is located in the garden and excreta is deposited on fruits and vegetables, or the larva may get into drinking water. Whether as fruit, vegetable, or drink, they are taken direct to the stomach perhaps infecting a new host.

We appreciate that this is not closely connected with the subject matter of this paper, but we trust it may be helpful in the effort of control of infection and thus aid in preventing clinical manifestations.

DR. KELLER (closing): I do wish to emphasize the point that Doctor Hays brought out in his discussion regarding the importance of sanitation in the control of hookworm.

Another point of interest that I wish to call to your attention is the spread of hookworm infection through family groups. In our study of the hookworm problem in Mississippi, it was found that where only one member of a family was infested the individual worm burden was approximately sixty worms. Where two or more members of a family were infested the individual worm burden increased. When seven or more members of a family had hookworm the individual worm burden was more than three hundred worms. These figures indicate that with increased soil pollution heavy worm burdens are built up in individual members of the family living under these conditions. Attention should be given to all members of a family and a specimen of feces examined from each person in order to clear up the foci of infection. Unless infestation is cleared up in all members of the family, reinfection will occur and the control measures will not be successful.

Mississippi State Medical Association

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EDITORIALS

DELEGATES TO STATE MEDICAL ASSOCIATION

BY-LAWS, Chapter V, Section 2. Each organized county shall be entitled to send to the House of Delegates each year one delegate for every fifty members and one for each fraction thereof; but each organized county holding a charter from the Association, which has made its annual report and paid its assessment as provided in this Constitution and By-Laws, shall be entitled to one delegate.

February 20, only 24 delegates had been reported to the secretary. They are:

Adams County, J. C. Rice, Natchez.
Benton County, Frank Ferrell, Ashland.
Clarke County, H. C. Watkins, Quitman.
Copiah County, R. B. Keller, Hazlehurst.
Forrest County, H. L. McKinnon, Hattiesburg.
George County, J. W. Horn, Lucedale.
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Issaquena County, W. H. Scudder, Mayersville.
Jefferson Davis County, G. C. Terrell, Prentiss.
Jones County, J. E. Green, Laurel.
Lafayette County, J. E. Green, Laurel.
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Warren County, J. A. K. Birchett, Jr., Vicksburg.
Wayne County, W. P. Gray, Waynesboro.
Wilkinson County, S. E. Field, Centreville.
Yallobusha County, R. J. Criss, Coffeeville.

STATE ASSOCIATION MEMBERSHIP

Society	Members Feb. 20, 1937	Members, 1936	White Physicians In Jurisdiction	Per Cent Members, 1937
Adams County	16	18	20	80.00
Amite County	6	8	10	60.00
Central	150	165	217	69.12
Claiborne County	0	4	7	0
Clarke-Wayne	5	5	21	23.81
Clarksdale and Six Co.	53	58	84	63.10
Delta	69	99	144	47.92
DeSoto	0	8	12	0.
East Mississippi	56	79	109	51.38
Franklin County	6	5	7	85.71
George County	5	0	5	100.00
Hancock County	4	4	9	44.44
Harrison County	25	39	49	51.02
Issaquena-Sharkey-Warren	37	38	54	68.52
Jackson County	9	11	11	81.82
Jefferson County	4	4	4	100
North Mississippi	50	59	85	58.82
Northeast Mississippi	126	120	208	60.58
Pike County	24	25	25	98.00
South Mississippi	48	56	139	34.53
Stone County	0	0	5	0
Tate County	0	11	11	0.
Tri-County	33	33	44	75.00
Wilkinson County	5	5	6	83.33
Winona District	46	49	81	56.79
TOTALS	777	903	1,367	56.84

MEMBERSHIP BY COUNCILOR DISTRICTS

District	Councilor	Members Feb. 20, 1937	Members, 1936	White Physicians In Jurisdiction	Per Cent Members, 1937
1.	J. W. Lucas	122	157	228	53.51
2.	L. L. Minor	50	78	108	46.30

3. R. B. Caldwell	126	120	208	60.58
4. T. J. Brown	46	49	81	56.79
5. W. H. Watson	187	207	278	67.27
6. H. Lowry Rush	58	81	122	47.54
7. J. Gould Gardner	56	59	152	36.84
8. W. H. Frizell	94	98	116	81.03
9. D. J. Williams	38	54	74	51.35
TOTALS	777	903	1,367	56.84

MISSISSIPPI PHYSICIANS DO NOT DIE YOUNG

In another column is a roll of Mississippi physicians who died in 1936, compiled by the State Board of Health. The statement some times made that "doctors die young" is not borne out by the records in Mississippi. Of the 49 doctors dying last year, only one was under 40 years of age, and only 5 were under 50 years of age. Thirty-one or 63.3 per cent were over 60, and 14 or 28.6 per cent had reached the "three score years and ten" mark or higher.

The age of death by decades as compared with 1935 was as follows:

	1936		1935	
Age	Number	Per Cent	Number	Per Cent
30-39	1	2.0	2	4.5
40-49	4	8.2	6	14.4
50-59	13	26.5	7	15.6
60-69	17	34.7	14	31.1
70-79	11	22.5	10	22.2
80-89	3	6.1	4	8.9
90			2	4.4

The causes of death given and the incidence of each were as follows:

	1936		1935	
	Number	Per Cent	Number	Per Cent
Diseases of Heart	16	32.7	12	26.7
Diseases of Heart and Kidneys			6	13.3
Diseases of Kidneys	5	10.2	4	8.9
Malignant Disease	6	12.3	4	8.9
Pneumonia	9	18.4	4	8.9
Automobile Accidents			3	6.7
Unknown			3	6.7
Senility			2	4.4
Cerebral Accidents	3	6.1	1	2.2
Duodenal Ulcer			1	2.2
Hypertension and Nephritis			1	2.2
Susicide	1	2.0	1	2.2
Septic Thrombosis and Pyemia			1	2.2
Heart and Hypertension			1	2.2
Burn			1	2.2
Tuberculosis	2	4.1		
Cirrhosis of Liver	2	4.1		
Lymphatic Leukemia	1	2.0		
Pellegra	1	2.0		
Hypertrophy of Prostate	1	2.0		
Septicemia and Bacteriemia	2	4.1		

In 1936, heart, kidney and blood vessel disease combined accounted for 21 deaths or 42.9 per cent. In 1935, these diseases accounted for 55.5 per cent of the deaths.

May we all live to consider the figures for 1937!

MISSISSIPPI PHYSICIANS WHO DIED IN 1936

The following is the name, age, residence, cause of death and date of physicians who died in 1936:

Anderson, Hugh, 56, Sanatorium, Pulmonary Tuberculosis, Feb. 6.

Baldwin, J. R., 54, Greenville, Chronic Interstitial Nephritis, Aug. 5.

Barron, Solomon Hugh, 64, Hopewell, Chronic Myocarditis, May 9.

Beekman, Philip, 71, Natchez, Cerebral Thrombosis, Feb. 14.

Benton, J. Burnett, 67, Valley Park, Cirrhosis of Liver, Sept. 29.

Blanton, William T., 69, McCool, Lymphatic Leukemia, July 14.

Blount, W. N., 64, Laurel, Arteriosclerosis, Heart Disease, Aug. 27.

Boyd, Richard M., 60, Aberdeen, Cerebral Hemorrhage, Aug. 22.

Brevard, S. A., 49, Deeson, Uremic Coma, April 19.

Brister, T. M., 53, Bogue Chitto, Carcinoma of Ampulla of Vater abt., Aug. 4.

Burkhalter, W. A., 69, Greenwood, Terminal Broncho-Pneumonia, Aug. 30.

Chamberlain, John F., 59, Natchez, Angina Pectoris, Oct. 26.

Chapman, A. L., 60, Hermanville, Congestive Heart Failure, Sept. 13.

Chisholm, John W., 63, Natchez, Coronary Thrombosis, Aug. 15.

Comfort, J. W., 67, Kosciusko, Coronary Occlusion, July 12.

Cook, Louis C., 60, Columbia, Acute Dilitation of Heart, May 7.

Davis, Grover C.. 48, Pelahatchie, Pellagra, March 19.

Dearman, William, 59, Whitfield, Suicide by Pistol Shot, Nov. 4.

Donald, R. M., 54, Moorhead, Angina Pectoris, Myocarditis, Sept. 9.

Gillespie, Edwin C., 45, Lambert, Influenza, Lobar Pneumonia. Feb. 22.

Gowan, Will Alex, 58, Kosciusko, Lobar Pneumonia, Jan. 14.

Gully, Henry S., 76, Meridian, Pneumonia, Feb. 19.

Guyton, W. S., 59, Pickens, Coronary Thrombosis, Nov. 23.

Harris, Franklin L., 58, Winona, Cirrhosis of Liver and Hyperthrophy of Heart, Dec. 29.

Higdon, J. C., 68, Belzoni, Acute Dilatation of Heart, Dec. 12.

Holt, Alfred, 74, Lorman, Lobar Pneumonia, Dec. 21.

Jones, M. A. (Col.), 49, Indianola, Morphinism and Acute Dilatation of Heart, May 23.

Kennedy, Oscar A., 65, Tremont, Myocarditis, June 20.

Lewis, W. H. H., 69, Fayette, Lobar Pneumonia, Jan. 6.

Mathis, W. W., 84, Taylor, Chronic Nephritis, Dec. 1.

Majure, S. A., 75, Hickory, Cardio-vascular Disease, Dec. 8.

Moore, Thornton A., 53, Holly Springs, Coronary Thrombisis, Jan. 17.

McNeal, B. F., 65, Moorhead, Hypertrophy of Prostate, Oct. 15 .

Pickering, W. H., 75, Collins, Carcinoma of Eyes, March 15.

Randall, James L., (Col.) 56, Hattiesburg, Myocarditis and Acute Failure, May 13.

Ramsay, Granville S., 37, Collins, Nephritis, Acute Interstitial, May 27.

Ratliff, S. R., 63, Van Cleave, Cancer of Stomach, Sept. 16.

Robertson, James R., 73, Columbia, Apoplexy, May 13.

Rogers, Frank A., 53, Hattiesburg, Hypertensive Heart Disease, Nov. 17.

Roseborough, J. L., 81, Senatobia, Uremia, Acute, April 22.

Shankle, S. M., 74, Hollandale, Septicemia, July 9.

Tatum, J. J., 77, Montrose, Carcinoma of Mouth, Sept. 17.

Teat, P. A., 58, Jackson, Lobar Pneumonia, May 28.

Thomas, S. S., 70, Maben, Lobar Pneumonia, April 24.

Thompson, J. W., 61, Independence, Tuberculosis of Lungs, Dec. 25.

Turner, John William, 78, Pontotoc, Pneumonia, March 15.

Weissinger, A. J., 66, Hernando, Bacteriemia Following Influenza, April 16.

Wells, Pressley N., 70, Russell, Cancer of Mouth, March 13.

Williamson, James F., 82, Pleasant Grove, Cancer of Colon, Aug. 24.

Year	Number of Deaths	Average Age At Death
1913	27	60
1914	27	65
1915	35	58
1916	28	62
1917	37	60
1918	32	54
1919	22	61
1920	31	63
1921	26	61
1922	23	64
1923	26	61
1924	34	63
1925	33	63
1926	25	61
1927	—	—
1928	28	61
1929	35	61
1930	51	60
1931	52	61
1932	39	62
1933	48	62
1934	45	64
1935	49	63
1936	49	64

PROPOSED LEGISLATION

The following bills recently introduced in state legislatures are taken from Legislative Bulletin No. 60, of Feb. 3, prepared by the Legislative Reference Committee of the American Hospital Association. They may give some indication of present thought in regard to medicine and hospitals.

California: S. 118.—Provides for the examination and licensing by the state board of health of all laboratory technologists and technicians and prohibits laboratory procedures to be made except by licensed personnel or physicians. Provision is made for the exemption of apprentices by the state board of health. Non-profit hospitals and hospital associations maintained by dues or contributions from employes are exempted.

S. 121.—Provides for regulation of medical and surgical services, including hospitalization and nursing contracted between physicians and surgeons and other persons. Physicians and surgeons holding contracts are required to make regular reports to the insurance department and pay a license fee of 1 per cent of income.

S. 288.—Provides that the accredited schools of nursing in addition to giving a 36 months course, shall be connected with a hospital approved by the state department of public health and having a daily average of not less than 100 patients.

GEORGIA

S. 37.—Provides for liens for money due physicians, drugless practitioners, dentists, nurses and hospitals for services rendered due to fault or neglect of other persons.

S. 78.—Appropriates $100,000 annually for the prevention and cure of cancer.

IOWA

S. 31.—Election of hospital trustees and providing none shall be physicians or licensed practitioners.

MASSACHUSETTS

H. 759.—Provides that consent must be obtained before the removal of any limb or organ in the body of the patient. After removal of such limb or organ, full explanation must be given by the physician to the patient or relative. Also physician must make written statement to patient or relative telling the nature of the operation and his reason for performing it. Physician or hospital is required to preserve limb or organ for the benefit of the patient for a period of not more than six weeks.

H. 1151.—Making it mandatory to report knowledge of induced abortion.

H. 1289.—To extend to medical examiners the right to perform an autopsy where such further examination is necessary to determine cause and manner of death.

MICHGAN

S. 60.—Hospital Liens. Hospitals, etc., to have a lien on funds received by patient to recompense injuries.

MISSOURI

S. 3.—Providing for establishment of State General Hospital with a special wing for cancer.

H. 33.—Gives cities, towns and villages with a population of less than 30,000 the power to license, tax and regulate all occupations, businesses and professions. Authority is specifically given to prohibit or suppress private general hospitals, sanatoriums and health schools.

NEBRASKA

Bill 105.—Provides that the state fire marshal shall inquire into the building plans and specifications of public and private hospital buildings.

NEW YORK

A. 260.—Adds new Art. 7-a, Vehicle and Traffic Law, for care of indigent persons suffering from motor vehicle injuries in hospitals not organized for profit and registered by state health department, per diem cost not to exceed $6 a day, and appropriating $350,000.

A. 299.—Amend Art. 23, Public Health Law, prohibiting persons other than licensed physicians, dentists and veterinarians to possess or cultivate live pathogenic microorganisms or viruses without permit from health commissioner and making other changes.

A. 312.—Adds new Art. 51-a, Education Law, for licensing of clinical laboratory technicians, setting up standards of education, and rules for advisory council and examining board in department of registration under board of regents.

A. 503.—Adds new Section 77-c, General Municipal Law, requiring city or town in which parents, or mother reside, to pay $75 toward expense in childbearing, payments first to be made to hospital and balance if any to be paid to parents for expense, and unexpended balance to city or town for a continuing fund.

UTAH

H. 48.—In the management of any tax free hospital no discrimination shall be made against registered physicians and surgeons recognized by laws of the State of Utah; all such physicians and surgeons shall have equal privileges in treating of patients in said tax free hospitals. The patient shall have absolute right to employ at his expense, physicians and surgeons and, when acting for any patient in any tax free hospital, the physician and surgeon employed by such patient shall have exclusive care and treatment of such patient, and nurses therein and patient shall be subject to the directions of such physician and surgeon, subject to such general rules and regulations as shall be established by the board of trustees of such hospital.

MISSISSIPPI STATE BOARD OF HEALTH

Two county nursing services have been organized in counties having part-time county health officers: Lawrence County, Mrs. Janie W. Calcote, R. N.; Simpson County, Mrs. Annie Mae Tate, R. N.

Five public health nurses were placed in full-time counties during February: Copiah County, Miss Emalee Lagrone, R. N.; Pearl River County, Miss Elizabeth Welton, R. N.; Sunflower County, Miss Evelyn Clower, R. N.; Warren County, Mrs. Anna B. Colburn, R. N.; Yazoo County, Miss Estelle Caro, R. N.

Dr. Underwood was appointed state judge for the Eighth Gorgas Essay Contest of the Gorgas Memorial Institute, Washington, D. C. The subject this year was, "The Importance of Mosquito Control and the Gorgas Memorial." Eleventh and twelfth grade students were given an opportunity to compete in this contest which closed January 15. The state winners will receive ten dollars and may enter the national contest; the winner of the national prize will get five hundred dollars and a trip to Washington.

Miss Gladys Eyrich, supervisor, Division of Mouth Hygiene, will make a return visit to Vanderbilt University, March 23, to speak to classes of nurses and health officers about the Mississippi Mouth Hygiene Program. This is Miss Eyrich's second engagement at Vanderbilt.

Dr. Robert A. Strong of the Medical Education Division has announced a course of five extension post-graduate lectures in pediatrics to be given in Amory starting March 22. A cordial invitation has been extended to every physician in Monroe County and near-by vicinities to attend these lectures.

On February 15, Eva Moore Adams, supervisor of health education, spoke to the Peripatetics Club in Brookhaven on "Health Education and Your Part In It."

The State Board of Health participated in the activities of National Narcotic Week by giving a special broadcast with Mr. Lew Wallace, secretary of the State Board of Pharmacy, as guest speaker. His subject was, "Our Narcotic Menace."

Another guest speaker on the regular Saturday morning radio program sponsored by the State Board of Health was Mr. Oliver Emmerich, editor of *The McComb Daily Enterprise*. Mr. Emmerich talked in his usual forceful manner on, "Supervisors and Other Officials in Relation to Public Health."

The Department of Vital Statistics keeps a record showing the number of birth deliveries made by each physician in the state. At the end of each year those physicians who have attended as many as one hundred births during the year are given public recognition. It was found that nineteen physicians attended one hundred or more births during the past year, the three leading doctors being: Dr. R. C. Eley, Moss Point, with 180 births; Dr. B. L. Crawford, Tylertown, with 178; Dr. W. C. Simmons, Bay Springs, with 155.

The nineteen physicians delivered a total of 2315 babies during the year.

Dr. J. W. Dugger, serving as health officer in Monroe County during the absence of Dr. C. H. Love, who is away on scholarship, reports that 565 were immunized against smallpox during the month of February. Plans are being made for this work to continue during March.

Dr. Underwood attended the Conference of Child Health and Protection in Austin, Texas, Feb. 4-5. As chairman of the section on Public Health, he addressed the gathering on, "New Trends in Public Health." Later at the evening session at the Driskill Hotel he spoke on "Health Education." Accompanying Dr. Underwood to the Texas Conference was Dr. J. W. Dugger, director, Industrial Hygiene and Factory Inspection.

On Feb. 3, Dr. Underwood gave a paper before the Seventh District Medical Society in Austin on the subject, "Mobilization for Human Needs."

Dr. Underwood talked about "Public Health Nursing" to a group of interested citizens, February 10, in Scott County at the noon luncheon of the Forest Rotary Club.

Dr. Underwood and Dr. Whitfield attended the meeting of the Thirty-Third Annual Congress on Medical Education and Licensure, Palmer House, Chicago, February 15 and 16. While in Chicago, Dr. Underwood visited the offices of the American Medical Association.

Dr. Felix J. Underwood, Dr. J. A. Milne, and Dr. H. C. Ricks, visited the Pike County Health Department, February 24. With Dr. W. Frank Walker, of the Commonwealth Fund these officials discussed the work of the placing special emphasis on the appraisal of activities carried on in 1936. The Commonwealth Fund plans to construct a building in McComb to house the health department.

Dr. H. A. Kroeze, director of the Division of Sanitary Engineering, will return to Vanderbilt University to deliver four lectures on food sanitation and two on industrial sanitation on March 15, 16 and 17. He is a member of the staff of lecturers for the course for sanitarians of this university.

This course is the second of its kind offered by Vanderbilt University and has representatives from nine southern states in attendance. There are five sanitation supervisors of Mississippi county health departments in attendance at the present course.

Jackson, EVA MOORE ADAMS,
March 5, 1937. Supervisor, Health Education.

DIRECTORY AND CALENDAR OF MEDICAL SOCIETIES

Information is not complete. Secretaries of societies are urged to send in full data so that it may be known when the societies of the state meet; also the names of the officers directing their activities this year should be known.

MISSISSIPPI STATE MEDICAL ASSOCIATION: 70th Annual Session and Thirty-fourth Annual Session of the House of Delegates, Meridian, May 11, 12, and 13, 1937.

Adams County Medical Society: A. R. Perry, Natchez, president; F. S. Dixon, Natchez, secretary. Meets third Tuesday, each month; Natchez, 7:30 p. m.

Amite County Medical Society: W. R. Stewart, Osyka, president. D. H. Thornhill, Crosby, secretary. Meets with Wilkinson County Medical Society, Centerville.

Central Medical Society: L. W. Long, Jackson, president; Gayden Ward, Jackson, secretary. Meets first Tuesday, each month, Robert E. Lee Hotel Roof, Jackson, 7:00 p. m., except July and August.

Claiborne County Medical Society: E. P. Jones, Hermanville, president; G. W. Acker, Port Gibson, secretary.

Clarksdale and Six Counties Medical Society: J. E. Powell, Charleston, president; N. C. Knight, Clarksdale, secretary. Meets fourth Wednesday of March and second Wednesday of November, Elks Club, Clarksdale, 2 p. m.

Clarke-Wayne Counties Medical Society: W. P. Gray, Waynesboro, president; Albert Hand, Shubuta, secretary.

Coahoma County Medical Society: I. W. Barrett, Clarksdale, president; N. C. Knight, Clarksdale, secretary. Meets second Wednesday each month, Clarksdale Hospital, Clarksdale, 1:30 p. m.

Delta Medical Society: J. W. Lucas, Moorhead, president; F. M. Acree, Greenville, secretary. Meets Second Wednesday of April and October. Rotates through five counties, 2 p. m.

Desoto County Medical Society: J. M. Wright, Hernando, president; L. L. Minor, Rt. 4, Memphis, secretary. Meets first Monday of January, April, July, October, Hernando, 10 a. m.

East Mississippi Medical Society: T. G. Cleveland, Meridian, president; Bob A. Cameron, Meridian, secretary.

Franklin County Medical Society: L. Costley, Meadville, secretary.

Hancock County Medical Society: A. P. Smith, Bay St. Louis, secretary.

Homochitto Valley Medical Society: Harrison Butler, Liberty, president; H. A. Whittington, Natchez, secretary. Meets January, April, July and October, 2 p. m.

Issaquena-Sharkey-Warren Counties Medical Society: G. C. Jarratt, Vicksburg, president; Leon S. Lippincott, Vicksburg, secretary. Meets second Tuesday, each month, Mississippi State Charity Hospital, Vicksburg.

Jackson County Medical Society: W. J. Weatherford, Pascagoula, president; R. G. Lander, Pascagoula, secretary. Meets second Thursday of March, June, September, Pascagoula, 7 p. m.

Jefferson County Medical Society: W. T. Harper, Fayette, secretary.

Newton County Medical Society: V. L. Henton, Decatur, president; Dudley Stennis, Newton, secretary. Next meeting, second Thursday in April, Decatur, 2:30 p. m.

North Mississippi Medical Society: R. G. Grant, Holly Springs, president; A. H. Little, Oxford, secretary.

Northeast Mississippi Thirteen Counties Medical Society: L. L. McDougal, Booneville, president; A. J. Stacy, Tupelo, secretary. Meets third Tuesday, March, June, September and December.

Pike County Medical Society: J. L. Bauer, McComb, president; Elise Rutledge, McComb, secretary. Meets first Thursday, each month, McComb, 6:30 p. m.

Pontotoc County Medical Society: L. O. Carruth, Tupelo, R.F.D., president; O. F. Carr, Pontotoc, secretary. Meets first Tuesday, each month, Pontotoc.

South Mississippi Medical Society: J. P. Culpepper, Hattiesburg, president; Carlton Temple, Hattiesburg, secretary.

Stone County Medical Society: Earl W. Green, Wiggins, secretary. Meets with Harrison-Stone-Hancock Counties Medical Society.

Tallahatchie County Medical Society: J. G. Backstrom, Tutwiler, president; J. E. Powell, Charleston, secretary. Meets first Thursday, each month.

Tate County Medical Society: W. D. Smith, Senatobia, president; J. Sidney Eason, Coldwater, secretary. Meets second Wednesday, each month, Senatobia.

Tri-County Medical Society: D. T. Langston, New Hebron, president; R. B. Zeller, Hazlehurst, secretary. Meets March 9 Copiah-Lincoln Junior College, Wesson; June 8, Walthal Hotel, Tylertown; September 14, Riverside Hotel, Monticello; December 14, Whitworth College, Brookhaven, 12:30 p. m.

Wilkinson County Medical Society: E. M. Butler, Centreville, secretary. Meets with Amite County Medical Society, Centreville.

Winona District Medical Society: P. B. Brumby, Lexington, secretary.

MISSISSIPPI HOSPITALS—CALENDAR OF STAFF MEETINGS

MISSISSIPPI STATE HOSPITAL ASS'N.

Eighth Annual Session, Meridian, May 10, 1937.

Anderson Infirmary, Meridian: Second Friday, each month 6:00 p. m.

Biloxi Hospital: First Friday, each month, 7:30 p. m.

Bramlett Hospital, Oxford: Third Wednesday each month, 7:30 p. m.

Charleston Hospital: First Thursday, each month.

Clarksdale Hospital: Second Wednesday, each month, 1:30 p. m.

George C. Hixon Memorial Hospital: First Monday, each month.

Gilmore Sanitarium, Amory: Third Thursday, each month, 7:30 p. m.

Greenwood-Leflore Hospital: First Thursday, each month, 7:30 p. m.

Houston Hospital: Last Friday, each month.

Jackson County Hospital: Second Thursday, each month except July and August, 7 p. m.

Jackson Infirmary: Last Tuesday, each month, 4 p. m.

Mayes Hospital, New Albany: First Monday, each month.

Meridian Sanitarium: Second Thursday, each month, 6:30 p. m.

Mississippi Baptist Hospital: Third Tuesday, each month, 6:30 p. m.

Natchez Sanatorium: Second Tuesday, each month, 7:30 p. m.

Northeast Mississippi Hospital: First Monday, each month, 7:30 p. m.

Rush's Infirmary: Second Thursday, each month, 7 p. m.

South Mississippi Infirmary: Last Thursday, each month, 5 p. m.

U. S. Veterans' Hospital, Gulfport: Every Monday, Tuesday, Wednesday and Thursday, 10:45 a. m.

Vicksburg Hospital: Second Thursday, each month, 7 p. m.

Vicksburg Infirmary: First Wednesday, each month, 7 p. m.

Vicksburg Sanitarium: Tenth or week of tenth, each month, 6:30 p. m.

Winona Infirmary: First Thursday, each month, 7:30 p. m.

MISSISSIPPI STATE PEDIATRIC SOCIETY

Dr. Harvey F. Garrison, president, Mississippi State Pediatric Society, has announced the program for the meeting of the Society, in Meridian, Monday afternoon and night, May 10, as follows:

Nutritional Anemia in Infants—Dr. Robert A. Strong, New Orleans.

Blood Transfusions, Indications, Contra-Indications, Results, Reactions, and Complications—Dr. Edward Clay Mitchell, Memphis, Tenn.

The Acute Abdomen in Children and Tracheo-Laryngo-Bronchitis and Acute Upper Respiratory Tract Infections in Children—Dr. Joseph Brennemann, Chicago, Ill.

The Infant Stool—Dr. Lawrence R. DeBuys, New Orleans. La.

Atelectasis in Children and Bronchoscopy in Pulmonary Disease—Dr. Paul Holinger, Chicago, Ill.

There will be a banquet.

The entire membership of the Mississippi State Medical Association is cordially invited to attend these meetings and the banquet.

POST-GRADUATE MEDICAL EDUCATION IN MISSISSIPPI

The reports prepared by Mr. Q. Edward Gatlin, secretary of the Committee on Post-graduate Medical Education of the Mississippi State Medical Association for the year of 1936 show a large amount of work accomplished. The courses given have brought to the doctors of Mississippi at their homes the best in post-graduate medical instruction and the association should be very proud of this worthwhile endeavor. The three programs carried out follow:

OBSTETRICAL INSTRUCTION

By Maxwell E. Lapham, M.D.

January 1, 1936 through December 31, 1936*

Centers (1936)	Enrolled	Pct. Pres.	Visitors	Consultations	Clinic Patients	Rab. Preg. Test
Senatobia	15	84	26	9	10	2
Batesville	9	84	10	3	1	3
Charleston	8	66	10	7	4	1
Greenwood	14	80	59	5	4	2
Winona	12	69	14	12	2	1
Laurel	11	66	136	11	5	3
Hattiesburg	19	82	24	15	9	4
Poplarville	8	82	27	7	3	3
Gulfport	26	77	38	24	10	6
Pascagoula	9	90	37	9	6	3
Lucedale	6	96	17	3	2	1
Lexington	12	80	16	10	7	1
Aberdeen	14	85	47	11	4	3
Columbus	11	69	65	13	3	2
Starkville	16	77	56	19	4	3
Louisville	7	85	8	9	2	1
Kosciusko	9	73	6	10	3	2
Meridian	18	70	67	10	6	2
Jackson	25	80	13	19		
Brookhaven	16	89	12	14	19	1
Sanatorium	15	87	80	5	1	1
Canton	8	81	17	3	1	
TOTALS	288	82	785	228	106	45

OPINIONS OF MEMBERS OF CLASSES OF THE CIRCUITS

Lectures: Excellent, 139; Good, 24; Fair, 1; Passable, 0; Poor, 0.

Clinics: Excellent, 73; Good, 35; Fair, 20; Passable, 7; Poor, 2.

Was course worth your time and money: Yes, 163; No, 1.

Other similar courses desired: Yes, 163; No, 0.

Note: Physicians attending three or more times were considered enrolled members. Approximately 100 physicians (specialists, out-of-state physicians, and the like) were considered as guests.

*Obstetrical program continued from 1935. Program for State inaugurated January 1, 1935; completed December 31, 1936. Classes during *two year* period were held in 45 centers with nearly 800 physicians attending.

TOTALS—Two Year Period. January 1, 1935 to December 31, 1936: Enrolled, 620; Per cent Present, 83; Visitors, 1,596; Consultations, 530; Clinic Patients, 212; Rabbit Pregnancy Tests, 87.

OPINIONS OF MEMBERS OF CLASSES OF THE CENTERS

Lectures: Excellent, 300; Good, 88; Fair 2; Passable, 0; Poor, 0.

Clinics: Excellent, 154; Good, 102; Fair, 58; Passable, 19; Poor, 6.

Was course worth your time and money: Yes, 383; No, 2.

Other similar courses desired: Yes, 385; No, 3.

PEDIATRIC INSTRUCTION

By Robert A. Strong, M.D.

Beginning July 6, 1936 and ending December 31, 1936‡

Centers	Enrolled	Per Cent Attendance	Visitors	Consultations
Clarksdale	28	82.3	20	17
Natchez	10	84.0	77	6
Laurel	25	82.4	141	12
Biloxi	23	89.5	43	9
Yazoo City	17	95.3	65	11
New Albany	21	80.0	27	16
Booneville	10	90.0	42	15
Houston	16	87.5	40	14
Oxford	50	96.0	200	21
Centreville	12	90.0		4
Newton	13	91.0	6	7
TOTALS	223	88.0	661	132

Dr. Strong has lectured to 10 professional and lay groups including Nurses' Institute, Medical Students, Civic groups, and the like, with approximately 425 attending.

‡Program of pediatric instruction to physicians to continue during 1937. Also, demonstrations and lectures to lay groups to include the "Nutritional Requirements in Infancy and Childhood" and the "Protection of Children against Communicable Diseases."

PEDIATRICS—FOR COLORED PHYSICIANS

Special references given to Maternal Health and Child Care

By Walter H. Maddux, M.D.
Lecturer and Clinician

Beginning August 15, 1936 and ending December 31, 1936**

Centers	Enrolled	Sessions	Total	Attendance	Visitors	Consultations	Rabbit Preg. Test
West Point	7	10	70	100.0	27		
Laurel	5	10	50	100.0	13		
Jackson	10	10	82	82.0	22		
Natchez	5	10	48	96.0	2		
Meridian	6	10	60	100.0	29		
Greenwood	4	10	30	75.0	10		
Greenville	6	10	56	93.3	8		
TOTALS	43	10	396	92	111	61	20

Opinions of Members of Classes of the Seven Centers: Lectures: Excellent, 43; Good, 0; Fair, 0; Passable, 0; Poor, 0. Clinic: Excellent, 43; Good, 0; Fair, 0; Passable, 0; Poor, 0.

Was course worth your time: Yes, 43; No. 0.

Other similar courses desired: Yes, 43; No, 0.

Dr. Maddux has lectured to 14 lay groups with a total attendance of 3,171 lay people.

Note: There are 56 licensed colored physicians in Mississippi. The comments from these physicians are excellent and the attendance has been more than satisfactory.

**The program to continue during 1937 with demonstrational clinics for physicians, special work among midwives and other groups.

CENTRAL MEDICAL SOCIETY

The quarterly meeting of the Central Medical Society was held at the Robert E. Lee Hotel, Jackson, Tuesday, March 2, beginning at 1:30 p. m.

The outstanding program, presented by the faculty of Vanderbilt University, School of Medicine, included the following:

Invocation. — Dr. B. E. Mitchell, Vanderbilt, 1908, M. A., Dean, Millsaps College, Jackson.

Clinic On Early and Late Manifestations of Syphilis; Diagnosis and Treatment. — Dr. Hugh J. Morgan, Professor of Medicine and Head of the Department of Medicine, Vanderbilt University. A number of patients were shown.

Surgery of The Stomach. — Dr. Barney Brooks, Professor of Surgery and Head of the Department of Surgery, Vanderbilt University.

Case Reports Emphasizing Important Points in the Diagnosis and Treatment of Common Gynecological and Obstetrical Diseases. — Dr. Lucius E. Burch, Professor of Gynceology and Obstetrics and Head of Department of Gynecology and Obstetrics, Vanderbilt University.

Allergy in Children. — Dr. Horton Casparis, Professor of Pediatrics and Head of the Department of Pediatrics, Vanderbilt University.

Fellowship Hour. — Roof Garden.

Banquet — Convention Hall.

Presentation. — Dr. W. Leathers, Dean of the Medical School and Professor of Preventive Medicine and Public Health and Head of the Department of Preventive Medicine and Public Health, Vanderbilt University, by Dr. F. J. Underwood, State Health Officer, Jackson.

Remarks by Dr. Leathers.

Clinics—Pathological Conference on Nephritis. — Dr. Ernest W. Goodpasture, Professor of Pathology and Head of Department of Pathology, Vanderbilt University and Dr. Hugh J. Morgan, Professor of Medicine and Head of the Department of Medicine, Vanderbilt University.

Nutritional Problems in Children. — Dr. Horton Casparis, Professor of Pediatrics and Head of Department of Pediatrics, Vanderbilt University.

Significant Public Health Trends in Mississippi. — Dr. Waller S. Leathers.

A large number of doctors from all parts of Mississippi and ladies were present.

Dr. Lawrence W. Long, Jackson is president and presided. Dr. Gayden Ward, Jackson is secretary.

CLARKSDALE AND SIX COUNTIES MEDICAL SOCIETY

The seventieth semi-annual session of the Clarksdale and Six Counties Medical Society was held at Clarksdale, Wednesday, March 24, beginning at 2:00 p. m.

The program as announced by the secretary, Dr. N. C. Knight, was as follows:

2 p. m. American Legion Hut.

Business Session: Election of Delegates.

Scientific Session:

1. The Problem of the Premature. — Dr. H. F. Garrison, Jackson.
2. Placenta Praevia. — Dr. T. G. Hughes, Clarksdale.
3. Public Health and the Venereal Diseases. —Dr. Felix J. Underwood, Jackson.
4. Foreign Bodies in the Food and Air Passages. — Dr. W. Likely Simpson, Memphis, Tennessee.

Remarks. — Dr. Harvey F. Garrison, President, Mississippi State Medical Association.

Remarks. — Dr. W. L. Little, Wesson, President-elect, Mississippi State Medical Association.

Recess.

7 p. m. Alcazar Hotel. Banquet.

"Plastic Surgery in the Everyday Practice of Medicine". — Dr. W. M. Adams, Memphis, Tennessee.

The Woman's Auxiliary to the Clarksdale and Six Counties Medical Society met in the Alcazar Hotel for a "Duch Luncheon" at 1 p. m.

Dr. J. E. Powell, Charleston, is president.

COAHOMA COUNTY MEDICAL SOCIETY AND CLARKSDALE HOSPITAL MEDICAL STAFF

The Coahoma County Medical Society and Clarksdale Hospital Medical staff met in the dining room of the Alcazar Hotel, March 10, at 12 o'clock. Immediately after lunch the president ordered the minutes read. They were approved as read.

There being no business to transact the scientific program was immediately entered into as follows:

Here and There About the Upper Air Passages.—E. LeRoy Wilkins.

Discussed by Drs. Hughes, Levy, Barrett, Warfield. Closed by Dr. Wilkins.

Dr. Wm. P. Warfield then gave an interesting case report.

There being no further business the meeting adjourned.

Clarksdale, N. C. KNIGHT,
March 13, 1937. Secretary.

ISSAQUENA-SHARKEY-WARREN - COUNTIES MEDICAL SOCIETY

A regular monthly meeting of the Issaquena-Sharkey-Warren Counties Medical Society was held at the Mississippi State Charity Hospital, Tuesday, March 9, and after supper served at 7:30 p. m., was called to order by the president, Dr. G. C. Jarratt.

PAPERS AND DISCUSSIONS—EYE, EAR, NOSE, AND THROAT..—Dr. H. H Johnston, Chairman.

1. Glaucoma.—Dr. A. G. Wilde, Jackson. Discussed by Drs. Alston Callahan, E. H. Jones, H. H. Johnston. Dr. Wilde closed.

2. Allergic Rhinitis.—Dr. E. H. Jones, Vicksburg. Discussed by Drs. Callahan and H. H. Johnston. Dr. Jones closed.

3. Case Report—Plastic Operation for Ectropion.—Dr. Alston Callahan.

4. Case Report—Progressive Pseudo Muscular Dystrophy, Three Cases in One Family. —Dr. W. E. Johnston.

The Society voted to nominate for election to honorary membership in the Mississippi State Medical Association Dr. H. H. Haralson, Vicksburg, a member of the association for more than fifty years and a past president, and Dr. W. H. Scudder, Mayersville, a member of the State Association for forty-five years and twice the president of this society.

The Society voted to invite the Mississippi State Medical Association to meet in Vicksburg in 1938. It was noted that the Association has not met in Vicksburg since 1930.

It was announced that Dr. D. L. Anderson, field clinician, Division of Tuberculosis Control, Mississippi State Board of Health, who recently held a clinic in Vicksburg, would return Friday, March 12, for consultation following a study of the cases examined.

The next meeting of the Society will be held April 13, and the program, devoted to internal medicine, as announced by Dr. W. K. Purks, chairman of the committee, will include:

1. A Review of Some Facts and Theories Concerning Allergic Diseases.—Dr. John P. Henry, Memphis, Tenn.

2. The Clinical Significance of Systolic murmurs.—Dr. W. K. Purks.

NEWTON COUNTY MEDICAL SOCIETY

The Newton County Medical Society held its regular meeting the second Thursday in February at Decatur, at 2:30 o'clock.

A very interesting program consisting of reports of all deaths at the Newton Infirmary by the doctors who had sent the patients in and the doctors who had treated them while at the Infirmary was given.

Those present were: Dr. W. C. Calvert, Union; Drs. Hagan, Laird, McMahen, Union; Drs. Henton and Pennington, Decatur; and Drs. Stennis and Flynt, Newton.

We are expecting a great meeting of the Mississippi State Medical Association in Meridian in May. The next regular meeting of the Newton County Medical Society will be the second Thursday in April at Decatur.

Newton. DUDLEY STENNIS,
February 20, 1937. Secretary.

PIKE COUNTY MEDICAL SOCIETY

The Pike County Medical Society held its regular monthly meeting in the ladies' parlor of the First Baptist Church in McComb. This meeting was called to order by the president at 6:45 p. m., Thursday, February 4. A dinner was served by the Dorcas Club of the First Baptist Church. After dinner the president again called the meeting to order and the minutes of the January, 1937 meeting were read by the secretary and approved by the Society. A report was made that 100 per cent of the physicians were members of this Society.

A motion was made by Dr. L. J. Rutledge that the health department administer all antirabic treatments. This was discussed by practically the whole group of members present. Dr. J. M. Smith amended the motion to limit the cases to be treated by the health department to indigents, and to have these cases treated by the health department only when referred by physicians. This motion, with its amendment, was unanimously adopted by the Society. The syphilis and malaria survey, as has been conducted in this county, was discussed by the county health officer, and plans were outlined for follow-up work by the health department.

Having no further business to come before the Society, the speaker of the evening was introduced by the president. Dr. Maxwell E. Lapham, the speaker of the evening, gave a most interesting discussion on "Intercurrent Diseases Complicating Pregnancy." During his talk he also discussed the maternity and infant death rate study he was conducting in the county. His talk was enjoyed by all present and was most instructive.

The following physicians were present from other counties: Dr. T. E. Wilson, Dr. A. G. Ward, Jackson; Dr. Maxwell E. Lapham, New York; Dr. L. W. Walker, Auburn; Dr. J. J. Pittman, Tylertown; Dr. C. W. Stewart, Gillsburg.

The following nurses were present: Mrs. Ella M. Sayle, Miss Christine Causey, Miss Louise James, Miss Roberta Mahoney, Miss Annabelle Leser, Miss Jane Redmond, and Mrs. Marie Long, all of McComb.

There being no further business the Society adjourned.

T. PAUL HANEY, JR.
Secretary.

McComb, Feb. 20, 1937.

TRI-COUNTY MEDICAL SOCIETY

A regular quarterly meeting of the Tri-County Medical Society was held at the Copiah-Lincoln Junior College, Tuesday, March 9, beginning at 12:00 noon.

Program:
Dinner.
A summer At The Mayo Clinic.—Dr. H. R. Shands, Jackson.
Carcinoma of the Cervix Uteri.—Dr. Leon S. Lippincott, Vicksburg.
Should We Scrap The Pharmacopea.—Dr. W. H. Frizell, Brookheaven.

Enjoyable features of the meeting were the dinner served in the general dining room of the college with the students and a program of music and dancing in the auditorium by students immediately following the dinner.

The next meeting of the Society will be held at Tylertown, June 9.

Dr. D. T. Langston, New Hebron, president, presided. Dr. R. B. Zeller, Hazlehurst, is secretary.

DESOTO COUNTY

The 1936 Annual Morbidity Report issued by the capable Mississippi Board of Health is interesting. Desoto County is listed with the Bluff Section. This healthy county during 1936 had no cases of smallpox, scarlet fever, dengue, other forms of tuberculosis, other forms of meningitis, hookworm, trachoma, ophthalmia neonatorum, puerperal septicemia, anthrax, rabies in man, undulant fever or typhus fever; only one case of acute poliomyelitis, two of measles, one of chickenpox, two of cancer and 100 per cent of physicians reporting. One large county reports 1747 cases of syphilis and 1855 cases of gonorrhea.

Dr. H. A. Stuart, Olive Branch, was a patient in the Baptist Memorial Hospital, Memphis, recently.

Dr. W. D. Casey, formerly of Walls, some point in Iowa and Memphis, has removed to Walls.

We all are looking forward with pleasure to the meeting of our State Associations in Meridian, May 10, 11, 12, 13, 1937. Meridian is a progressive city and will bid our people a warm and hospitable reception.

This is not news when one says that Dr. Harvey F. Garrison has set a high example for presidents to emulate. As president-elect and president he has been active and constructive in every respect. I have known Garrison since college days and am not surprised at his fine record.

He will turn the office over to a worth successor, Dr. W. L. Little, Wesson; we will be glad to render every help to the good doctor during his incumbency.

This county furnishes the vice-president from north Mississippi in the person of Dr. A. L. Emerson, Hermando.

I mentioned last month that Dr. W. B. Maxwell, Nesbitt, was the only retired physician in the county. I inadvertently left out the name of Dr. F. M. Pollard, Horn Lake. Dr. Pollard was for a number of years a successful practitioner of Lake Cormorant. He lives with his brother and is enjoying a deserved rest.

It was only recently we heard of the accident to our most esteemed editor's little son; we pray that he has fully recovered. Dr. Lippincott has always been courteous and gentlemanly and we feel for him and his estimable wife.

Memphis, Tenn., Route 4 L. L. MINOR,
March 9, 1937. County Editor.

FRANKLIN COUNTY

DR. A. C. LOFTON

Dr. A. C. Lofton, of Lucien, died on February 21, of bronchopneumonia, following an attack of influenza. He had been a sufferer from diabetes, also, for several years. He was a veteran of the World War and saw active service in France. He is survived by his wife and one son, Thomas.

Quentin, S. R. TOWNS,
March 4, 1937. County Editor.

HUMPHREYS COUNTY

Mrs. Robert Jackson, Belzoni, has been called to Daytona Beach, Florida, on account of the serious illness of her father. We wish for him a speedy recovery.

Mrs. J. C. Higdon, Belzoni, is slowly recovering from a recent attack of influenza.

Dr. Robert Jackson accompanied Dr. J. W. Jackson to King's Daughters Hospital, Greenville, February 19. Dr. J. W. gave up his appendix.

Dr. Cottrell, Indianola, and Dr. McCalip, Yazoo City, are alternating in taking care of Humphreys County Health Department in the absence of Dr. J. W. Barkley.

Dr. Hickerson held a chest clinic in Belzoni last week. We feel that considerable benefit is derived from Dr. Hickerson's work. Local physicians appreciate his unusual interest and assistance in directing what is best not only in the care of tubercular cases, but in demonstrating the use of the x-ray as a definite diagnostic aid where the case is suspicious or questionable. We shall find ourselves more and more in the need of good chest pictures and not infrequently of consultation service from men who have special training in chest examinations.

Our 1936-37 influenza, or whatever it really is, seems to be an unknown quantity. This applies particularly to the insidious mild case that often goes unrecognized for weeks or months after, when chest or sinus complications or complications elsewhere have developed.

Physicians of our town have encountered more cases of acute and subacute appendicitis during the past twelve months than they usually see in three or four years. Many of these are convalescing from "flu", had influenza several weeks or months ago, and haven't quite regained strength or their normal appetites; while not a few recently have been found right in the middle of an acute attack of influenza.

Heretofore we have been rather reserved about diagnosing appendicitis coincidental to an acute respiratory condition. Take no chances with these cases that are being encountered now. At this minute there are three cases with ruptured appendices in King's Daughters Hospital at Greenville which were brought in from different localities within less than a week.

The editor regrets delay in this report due to his continued illness.

Belzoni,
March 15, 1937.

J. W. JACKSON,
Per Mrs. J. W. Jackson,
County Editor.

TALLAHATCHIE COUNTY

Spring seemingly is here again. We all feel better as the flowers begin to bloom, trees begin to bud, and the blue birds begin to chirp. Here's hoping this will be another good farm year for our state. Through the goodness of our Creator, Old Man Cotton put on a showing in 1936 unequaled in many years. It put our state out of chaos into prosperity and happiness.

Dr. D. G. Bardwell says it makes a fellow feel older when he becomes grandpa. Mrs. Frantie O'Shea, Dr. Bardwell's eldest daughter, gave birth to a fine girl about two or three weeks ago. Dr. Bradwell says she favors her grandpa.

Dr. and Mrs. J. E. Powell spent a couple of days in Memphis and one day in Calhoun City last week.

Dr. and Mrs. J. W. Moody, spent a day in Memphis recently.

Mrs. Moody left for New Orleans, La., on the seventh to spend a few days with her sister. The writer is leaving to-night, March 11, to join her, and be present Saturday at which time Mrs. Moody will undergo an operation at Touro Infirmary.

J. W. MOODY
County Editor

Charleston
March 11, 1937

WARREN COUNTY

With the passing of another month "much water" has passed by the foot-hills of our chief city, Vicksburg. Much water has also been backed up the Yazoo River, covering a triangular piece of land having its apex at Vicksburg, its base a line running east and west for some forty miles beginning from a point below Yazoo City, extending to near Mayersville. The perpendicular of this isosceles triangle of water is also some forty miles. The inhabitants of this vast area of some eight hundred square miles have come as refugees to the bluff country extending from Yazoo City to Vicksburg and below. Quite a few of these are absorbed in the homes of friends. relatives, etc.; others have gone to camps or provide their own tents or shacks. The waters are receding rapidly, but a month or more will pass before all this back water finds its way into the Mississippi and the Gulf. As usual, the Red Cross has been active and has served many. The doctors of the Issaquena-Sharky-Warren Counties Medical Society voluntarily offered their services as a whole for minor or major disasters.

Dr. Preston Herring goes to New Orleans to attend the Post-graduate Medical Assembly. He has not "Gone with the Wind" but with the erudite men of medicine.

During February Dr. Edley Jones found time to "steal away" on a short visit to New Orleans.

Dr. and Mrs. I. C. Knox have announced the approaching marriage of their daughter, Mary Jo, to Mr. Robert Monroe German. The marrage vows are to be taken by this excellent young man and noble girl the 27th of March, 1937 at the First Baptist Church of this city. Their many friends and the professional friends of Dr. and Mrs. Knox, wish for them supreme and abiding happiness.

"For happy they, the happiest of their
kind!

Whom gentler stars unite, and in one fate,
Their hearts, their fortunes, and their
beings blend."

Dr. G. W. Gaines, Tallulah, and honorary member of the Issaquena-Sharky-Warren Counties Medical Society, seems to have regained his former strength following an injury to his arm, and he again gladdens his friends in Vicksburg by regular attendance at the society and staff meetings at our various hospitals.

In the first week of March, Dr. D. L. Anderson from the State Tuberculosis Sanatorium conducted the annual tuberculosis diagnostic clinic in our county, The local doctors have cooperated most helpfully this year and have sent in many patients, contacts and suspects. The local Anti-Tuberculosis Association helps sponsor this clinic and pays from its funds for the x-ray films. This clinic is held in the office of the Warren County Health Department. Five days were given to this work by Dr. Anderson and his helpers. There were eighty-four examinations made.

Those of our doctors, as we are advised, attending the March meeting of the Central Medical Society were Drs. Walter Johnston, A. Street, R. H. Dent, Guy Jarratt, Leon S. Lippincott, and B. B. Martin,Jr. They report an outstanding, unusual program presented by the faculty of Vanderbilt University. The spirit of democracy, congeniality, *"share the wealth"* and care for the health were potentially manifested in the social features.

The beautiful home of Dr. and Mrs. J. S. Ewing on Drummond Street, which has just been completed, is an ornament to that locality as well as to the city of Vicksburg and to Dr. Ewing, Mrs. Ewing and Jack it will be home, and we opine they are voicing the words of Will Carleton when he wrote:

"And we never will have a better home,
if my Opinion stands,
Until we commence a-keepin' house in
the house not made with hands."

"Honor and shame from no conditions rise,
Act well thy part, There all the honor lies."

The acting well on their part of the eight senior student nurses of the Vicksburg Infirmary culminated in the beautiful exercises at the Cherry Street Presbyterian Church, Sunday night, March 7, when these young nurses received their "caps". Ye editor regrets he was unable to be present but "Mr. Flu" was an uninvited intruder in his home and kept him there.

The Louisiana-Mississippi Ophthalmological and Oto-laryngological Society will hold its annual meeting in Vicksburg, April, 3. It is difficult by aspirating, shrinking or suction methods to get out of the officials just what weighty subjects these "head" men will solve or ponder over, nevertheless, it is surmised that "drops" and "glasses" will be on exhibition for experimental purposes, as dilating the pupils, testing vision, etc.

Charleston, Carolina's harbor, has harbored for the past few days, Dr. A. Street of Vicksburg, while he attended the meeting of the Southeastern Surgical Association.

On March 10, Dr. Leon S. Lippincott of our city conveyed himself to Wesson, where he as guest speaker, read a paper before the Tri-County Medical Society.

"For fate has woven the thread of life
with pain,
And twins ev'n from birth are *Misery* and
Man!"

We are cognizant that pain, misery and sorrow must of necessity come into the life of any mortal who lives to the age of accountability, but to him who passes the alloted "three score and ten" there may have been much pain and misery and sorrow—yet there must have been many joys.

No doubt it was a surpassing hour and experience of gladness in the life of Dr. H. H. Haralson when he in the hallowed circle of forty of his "kith and kin," wife, daughters, grand-children, and great grand-children, celebrated his eighty-third birthday,March 10, in the days and years that have passed, but no doubt hours and days of joy and happiness like unto this present birthday celebration have more than compensated in his life for his "crown of thorns." So we delegate to our pen and the columns of *The Mississippi Doctor* the exalted prerogative and cherished privilege of expressing our congratulations and good wishes to Dr. Haralson on his eighty-third birthday, and pray that many happy returns may yet come to this doctor "whose well taught mind the present age surpassed."

DR. H. T. IMS,
County Editor.

Vicksburg,
March 11, 1937.

WASHINGTON COUNTY

Mrs. A. V. Murry, wife of Dr. Murry, Greenville, is the proud possessor of a new Buick which she won as second prize in a subscription contest held by the Delta Star of Greenville. We congratulate Mrs. Murry as she has resided in Greenville, where she came as a bride for less than a year.

The firm of Gamble Bros. & Montgromery,

Greenville, regret the loss of Drs. J. F. Lucas and R. E. Wilson who resigned early in February. Their positions at the clinic will be filled as soon as practicable.

For five days during February free chest clinics were conducted at Greenville, Leland and Hollandale by field clinicians Drs. W. H. Hickerson and D. L. Anderson of Sanatorium. This work in tuberculosis control is sponsored by the Washington County unit of the American Tuberculosis Association.

Dr. H. A. Gamble, Greenville, attended the southeastern sectional meeting of the American College of Surgeons which met this year in Atlanta, Ga., Feb. 3 to 5.

Dr. E. T. White, Greenville, was confined to his home for a few days this month because of an attack of influenza.

Dr. T. B. Lewis continues to recover satisfactorily from his fractured hip. He has been visited at his home this month by his daughter, Mrs. Jimmie Franklin, Jackson.

Dr. C. P. Thompson, Greenville, has moved from his suburban home, which he sold, to his new home on Washington Ave., which he finds more convenient to his practice.

Dr. O. H. Beck was called to Chattanooga, Tenn. by the death of his sister, Miss Anne Beck, who passed away Feb. 13 in Rochester, Minn. His sister had devoted her life to the profession of teaching.

J. A. Beals,
County Editor.

Greenville,
March 4, 1937.

WINSTON COUNTY

Dr. T. C. Suttle was in the city this week on business.

Dr. L. T. Parks, of Fearnsprings neighborhood, was on the streets this week. The doctor has been in bad health but is apparently better.

Dr. C. A. Kirk of Fearnsprings, who has been in New Orleans taking a review course, is back home again.

Dr. H. B. Wadkins, Noxapater, the county health officer, was in the city this week looking after contagious diseases now in the county.

Mrs. Roy Lovorn is just back from York, Ala., having stayed a few days with her sister, Mrs. Shelby, who died recently from pneumonia. Mrs. Lovorn being the nurse of the writer was substituted by Miss Sallie Olive King while she was away.

M. L. MONTGROMERY,
County Editor.

Louisville,
March 10, 1937.

HOSPITAL STAFF TRANSACTIONS

CHARLESTON HOSPITAL STAFF MEETING

The Charleston Hospital staff met at the Rotary Hall, Thursday night, March 4, where a bountiful feed was served by the City Cafe. The county medical society met in connection with the hospital staff. Drs. L. D. Biles, J. A. Biles, Sumner; E. M. Meek, Glendora; T. C. Clay and J. G. Backstrom, Tutwiler; R. D. Byars, Cascilla; G. C. Denson, Vance; Townsend (Ph. D.), Webb; and Powell, Bardwell, Harrison and Moody, Charleston, were present.

The discussions of patients in and out of the hospital were entered into by all present which was of interest to all present. Our meetings are more of round table meetings; no papers read. We find this much better than a set program.

Dr. Backstrom was elected president; Dr. T. F. Clay, vice-president; E. Powell, secretary and treasurer for the present year. Next meeting April 1st at Webb.

Miss Berle Gordon, who has been head nurse at Charleston Hospital, left February 4 for a rest and later will take some special work in New Orleans. Her place was filled by Miss Maurine Hudwall who came from York, Ala. Miss Alberta Richardson, R. N., replaced Miss Margaret Ward who went to Jackson Infirmary.

Dr. L. G. Biles, Sumner, visited the hospital this week. Drs. Bardwell, Powell, Backstrom, Biles, E. M. Meek, F. C. Freedland have patients registered at the hospital.

Dr. Criss, Coffeeville, was a visitor in the hospital last week.

The Charleston Hospital is having some painting done on the interior which adds much to its appearance.

Mr. W. H. (Corn Club) Smith, Jackson, was a visitor in the hospital this week looking after the interest of The Hospital Insurance Orginization Association. Mr. Smith is president of the new organization.

Charleston, J. W. MOODY,
March 11, 1937.

HOUSTON HOSPITAL STAFF MEETING

The regular monthly staff meeting of the Houston Hospital was held at the hospital, Friday, February 26, at 7:00 p. m.

Miss Minnie Byrd Lockhart, Buena Vista, violin soloist, and Miss Orin Ford, Houston, accompanist, rendered a lovely program of music while supper was being served.

The visiting speakers on the program were Dr. Wm. Milton Adams, plastic surgeon, Memphis, Tenn., and Dr. Dick Cauthen McCool, nervous and mental diseases, Memphis, Tenn., Dr. Adams gave a splendid talk on "Plastic Surgery in Every Day Practice" after which Dr. McCool discussed the relation of mental diseases to physical disfigurements. Dr. R. M. Adams, Ripley, father of Dr. Milton Adams, was present on this occasion and gave a short talk on the service rendered by the general practitioner to his community.

The Houston Hospital has its staff meeting the last Friday night in each month and all doctors and their wives are cordially invited to attend.

VICKSBURG SANITARIUM STAFF MEETING

A regular monthly meeting of the Vicksburg Sanitarium was held Wednesday, March 10, and after a supper served at 6:30 p. m., was called to order by the president, Dr. George M. Street, with ten members and one guest present. The program included:

Reports from the Records Department and Analysis of the Work of the Hospital.

Report of Vital Statistics.—Dr. F. Michael Smith, director, Warren County Health Department.

Special Cast Reports:

1. Adeno-Carcinoma of the Fundus Uteri. —Dr. G. M. Street.

2. Dermoid Cyst of the Ovary.—Dr. J. A. K. Birchett, Jr.

3. Carbon Monoxide Poisoning.—Dr. L. J. Clark.

Discussed by Drs. L. S. Lippincott and G. C. Jarratt.

4. Premature Separation of the Placenta and Utero-Placental Apoplexy with Recovery. —Dr. R. A. Street, Jr.

Demonstration of selected raidographic studies: Ununited Fracture of Radius, Bone Graft; Fracture of Neck of Femur; Arthritis of Hip Joint, Postoperative; Carcinoma of Lumbar Spine, Metastatic; Squamous Cell Carcinoma of Mandible; Pulmonary Tuberculosis; Cholelithiais (Two Cases); Gallbladder and Liver For Discussion; Duodenal Ulcer; Double Ureter (Two Cases); Polycystic Kidney With Multiple Calculi.

The next meeting of the staff will be held Monday, April 12, 1937.

ABSTRACT: DERMOID CYST OF THE OVARY

By J. A. K. Birchett, Jr., M.D.

Patient.—White, female, age 32, housewife, married, one child.

Complaint.—Mass in lower abdomen, with sensation of pressure and fullness.

History of Present Complaint.—Four years ago noticed mass in the lower abdomen with sensation of pulling and pressure on change of posture. This was accompanied, at times, by a sharp stabbing pain, which was relieved by getting up and standing on her feet. At menstrual period the pain was more marked. The duration of the period was usually four to six days. At various times, it was necessary for her to have medical attention because of frequency and painful urination. This was associated with profuse vaginal discharge.

Past History.—Gallbladder removed in 1930 for chronic digestive disturbance. Still suffers with occasional attacks of gaseous distention and indigestion, which is relieved by taking soda. Appendectomy in 1924. In 1932 perineal repair for third degree laceration following forceps delivery. General health has been fair; no malaria; no confining illnesses. Complains of marked constipation; necessary to take laxatives all of the time to get any elimination.

Family History.—Father living and well; mother died of influenza; five brothers living well. No history of tuberculosis or cancer.

Physical Examination.—Well developed and well nourished white female. Temp. 98 degrees F.; pulse 80; blood pressure 120/80. Nose and throat negative; teeth in good condition; no thyroid enlargement; heart and lungs normal. Abdomen shows many scars, one upper right rectus, one lower midline. Mass in suprapubic region, apparently the size of a three and one-half months pregnancy. Mass is readily movable. Complains of some pain during menstruation. Pelvic examination: perineal floor shows scar following previous reconstruction; no cystocele; no rectocele. Cervix pointed forward and upward, has a slight lateral scar, but no ulceration. There is a profuse white vaginal discharge. Bimanual examination reveals a large firm mass, apparently attached to the left adnexium. Fundus of the uterus small and hard and is pushed to the right and down into the pelvis because of the mass lying upon it. Mass is very resistant and gives the impression that it is either an ovarian growth or a large pedunculated fibroid.

Clinical Laboratory.—Urine, normal; blood count, essentially normal, except for a slight increase in the total leukocyte count and low red cell count, 4,000,000. Blood Wassermann negative; agglutination test for undulant fever, negative. Sedimentation rate shows an index of 14 millimeters; sedimentation time 2 hours and 5 minutes.

Procedure.—From the examination and history, we felt that we were dealing either with ovarian cyst, which was becoming twisted on its pedicle, or a fibroid, and we, therefore, advised laparotomy for removal of the mass. The patient was very loath to be subjected to another abdominal operation, but we assured her that this was the only way to relieve the condition present. Therefore, under a general anaethetic, a midline incision was made, excising the old scar. The peritoneum was remarkably free from adhesions. The mass proved to be a dermoid cyst of the right ovary, the size of a large grapefruit, which was non-adherent to any of the adjacent structures. The pedicle, which included the tube, was ligated and the mass removed. There was some evidence of torsion in the pedicle and this was untwisted before ligation was made, so as to give a good exposure of the structures and so that the vessels could be isolated and ligated. All raw surfaces were carefully peritonealized. The left tube and ovary were normal. The uteus, after the removal of the mass, which was holding it down, assumed its normal position. There was no evidence of any nodules or masses in the body of the uterus. It was not thought necessary to suspend this structure. The appendix had been removed at a previous procedure and the terminal ileum was free from adhesions. The hand was passed up into the upper abdomen. The gallbladder was not present. There were many adhesions between the gall bladder fossa and omentum and duodenum. The duodenum was freed from the under surface of the liver where it was adherent and the raw surfaces were prevented from becoming adherent by the interposition of a large area of normal omentum. After this procedure, the wound was closed without drainage.

Subsequent.—The patient made an uneventful recovery; was discharged on the 12th postoperative day. She has been seen in the out-patient department, has begun to gain weight and is free from all abdominal discomfort. There has even been a relief so far of the upper abdominal distention and digestive disturbance. The pathological report showed right ovary with adherent tube weighing 450 grams. The ovary was 4½x4x4 inches. The wall was thin and filled with sebaceous material and many brown fine hairs. Microscopic examination showed hair, some bone, a few areas suggesting retina, considerable fibrosis and considerable chronic inflammatory.

ABSTRACT: PREMATURE SEPARATION OF THE PLACENTA AND UTERO-PLACENTAL APOPLEXY, WITH RECOVERY

By R. A. Street, Jr. M.D.

Patient.—White, female, age 23, married; admitted to Sanitarium about 8:30 p. m., January 28.

Chief Complaint.—Hemorrhage from vagina and abdominal pains.

Present Illness.—Last menstraul period May 8. Under care of local physician and nothing unusual noted prior to date of admission to hospital. About 5:30 p.m., while standing on her back porch suddenly noted passage of bright red blood from vagina and immediately called her doctor. No abdominal pain at this time, but some pain across back, which had been noted practically all day long. About thirty minutes later abdomen began to pain considerably; pain of a constant type, and not interval pain such as would be characteristic of labor. Continued to bleed though not as profusedly as at first. Advised by her doctor to come to hospital immediately. Given ¼ grain of morphine by hypo before leaving.

Physical Examination.—Temp. 99°F.; pulse 90; respiration, 20; blood pressure 120/84. Heart and lungs, negative. Abdomen tender over fundus of uterus; fetus, apparently almost at term, in breech presentation. Fetal heart sounds regular; rate varies from 110 to 120. Vaginal examination limited to very gentle palpation of lower cervical canal under extreme aseptic precautions. Bleeding observed at vaginal outlet, a mixture of bright and dark red blood. It was felt that premature separation of the placenta had occurred and immediate caesarean section was advised.

Clinical Laboratory.—Urine: albumin, 1/30 of 1% (by weight); rare finely granular casts; rare fresh blood cells (catheter specimen.) Several donors were typed and tested for compatibility for blood transfusion.

Operation.—Low midline incision and low classical type of caesarean section was done. Upon incising the lower part of the uterus, the placenta was encountered but there was no bleeding when placental tissue was cut, indicating rather an extensive separation of the placenta. The child was easily delivered but was in very poor condition; however, it was revived in a few minutes and, with careful watching, continued to improve. The placenta was then removed without difficulty and practically no bleeding. The uterine cavity was packed with gauze, the packing being pushed through the cervical canal and into the vagina so that it could be removed the next day. The uterus was mottled and bluish in color throughout the entire fundus and was a little slow in responding to pituitrin given in the muscle of the body of uterus. It did contract fairly well in a few minutes. The wound was closed to exit of one Penrose drain, which extended down to the perineum at the lower angle of the incision. General condition of patient seemed fairly good at this time.

A donor was available shortly after the operation was completed and 500 c.c. of citrated blood were given intravenously. One ampoule of ergotrate was given every four hours during the first 24 hours. Packing was removed the next day. Glucose solution was given intravenously daily. Condition was rather critical for several days and there was a persistent cough from an acute bronchitis, for which mustard plasters were applied to the chest every six hours. On January 31 duodenal tube was put into stomach and stomach lavage done every thirty minutes until residual was clear, to relieve abdominal discomfort. This, combined with colon irrigations and heat tent to abdomen gave much relief and improvement began. February 4, liquid diet was given. heat tent removed, stomach lavage discontinued and retention enemas about three times a day were begun. Drainage from the wound was very profuse but gradually decreased. General condition improved rapidly. Discharged January 14 in excellent condition, the baby also being in excellent condition.

Comment.—The outsome was fortunate for both mother and baby as the patient was certainly in a critical condition when first seen and following the operation. I wish to emphasize the particular significance that one should attach to the finding of a tender uterus although the history might have indicated placenta praevia with onset of sudden painless bleeding. Constant pain, appearing shortly after the onset of bleeding, combined with a tender uterus, was diagnostic of placental separation and indication for immediate section. Had operation been deferred another hour or two, unquestionably the baby would have been dead and the mother would have had less chance for recovery due to the increasing utero-placental apoplexy. The finding of a slow fetal heart rate also indicated that the baby was rapidly becoming asphyxiated.

HONOR ROLL

The following have contributed to the news section of our Journal this month:

County Editors: Desoto, L. L. Minor; Franklin, S. R. Towns; Humphreys, J. W. Jackson; Tallahatchie, J. W. Moody; Warren, Dr. H. T. Ims; Washington, J. A. Beals; Winston, M. L. Montgomery. Total, 7.

Societies: Mississippi State Pediatric Society, H. F. Garrison; Central Medical Society, Gayden Ward; Clarksdale and Six Counties, N. C. Knight; Coahoma County, N. C. Knight; Issaquena-Sharkey-Warren Counties; Newton County, Dudley Stennis; Pike County, T. Paul Haney, Jr.; Tri-County, R. B. Zeller. Total, 8.

Hospitals: Charleston Hospital, J. W. Moody; Clarksdale Hospital, N. C. Knight; Houston Hospital; Vicksburg Sanitarium. Total, 4.

Others: T. M. Dye; F. J. Underwood; Eva Moore Adams; Q. Edward Gatlin. Total, 4.

Grand Total:23.

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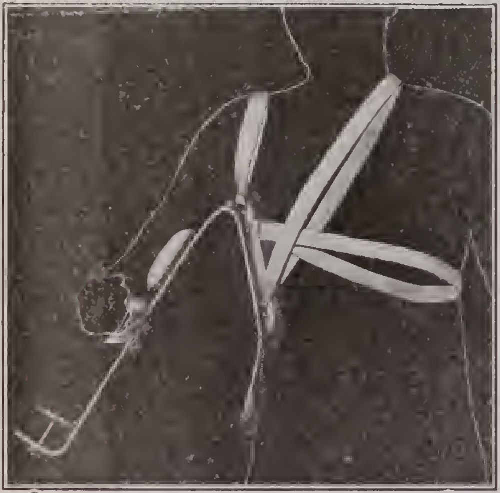

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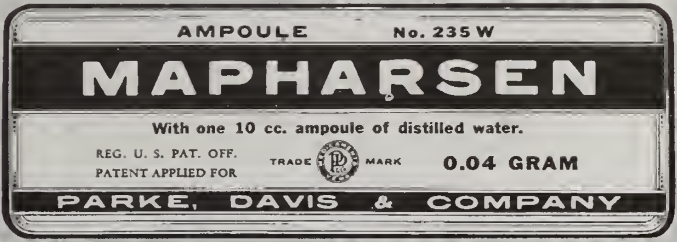
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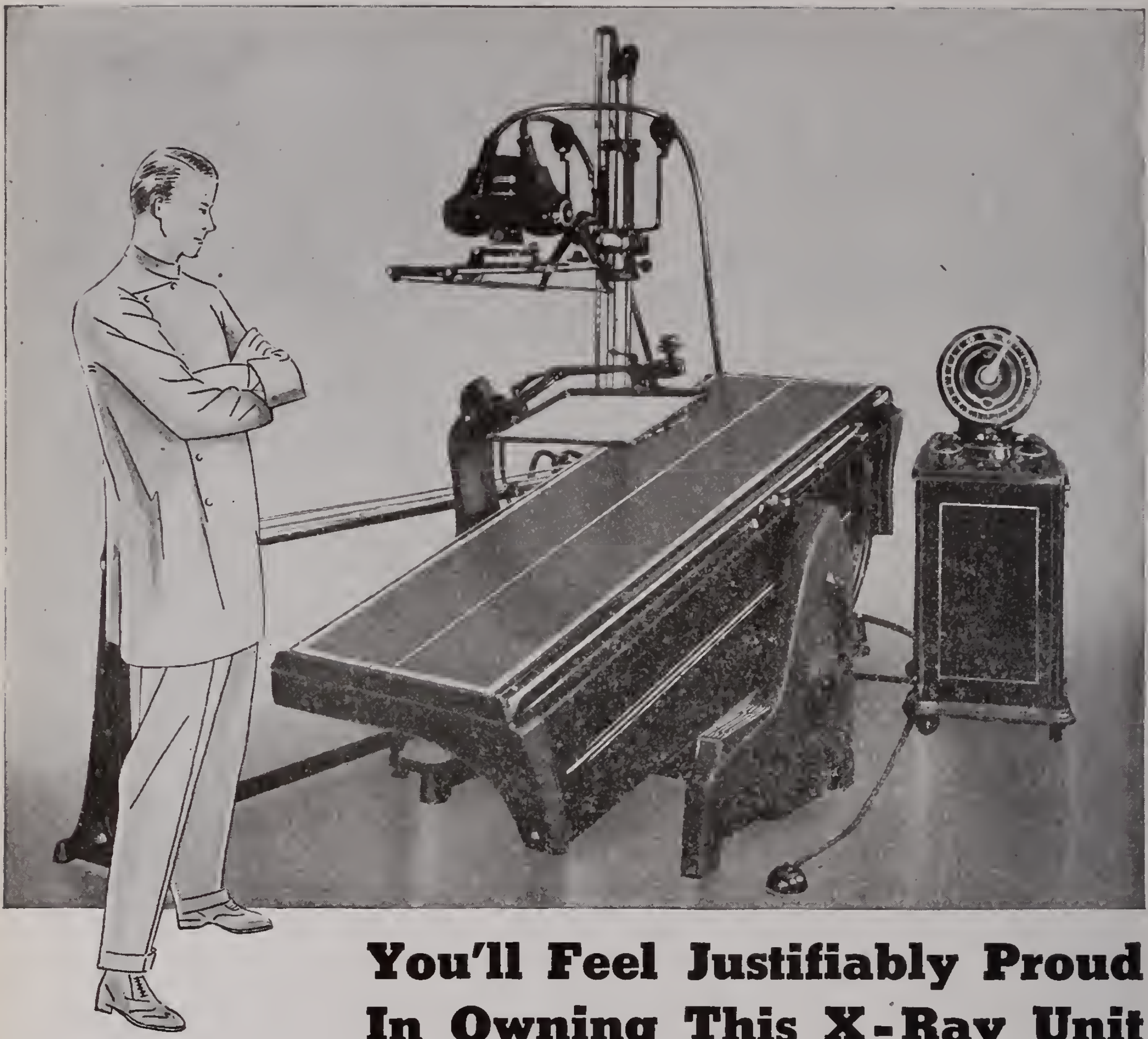

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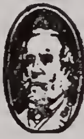

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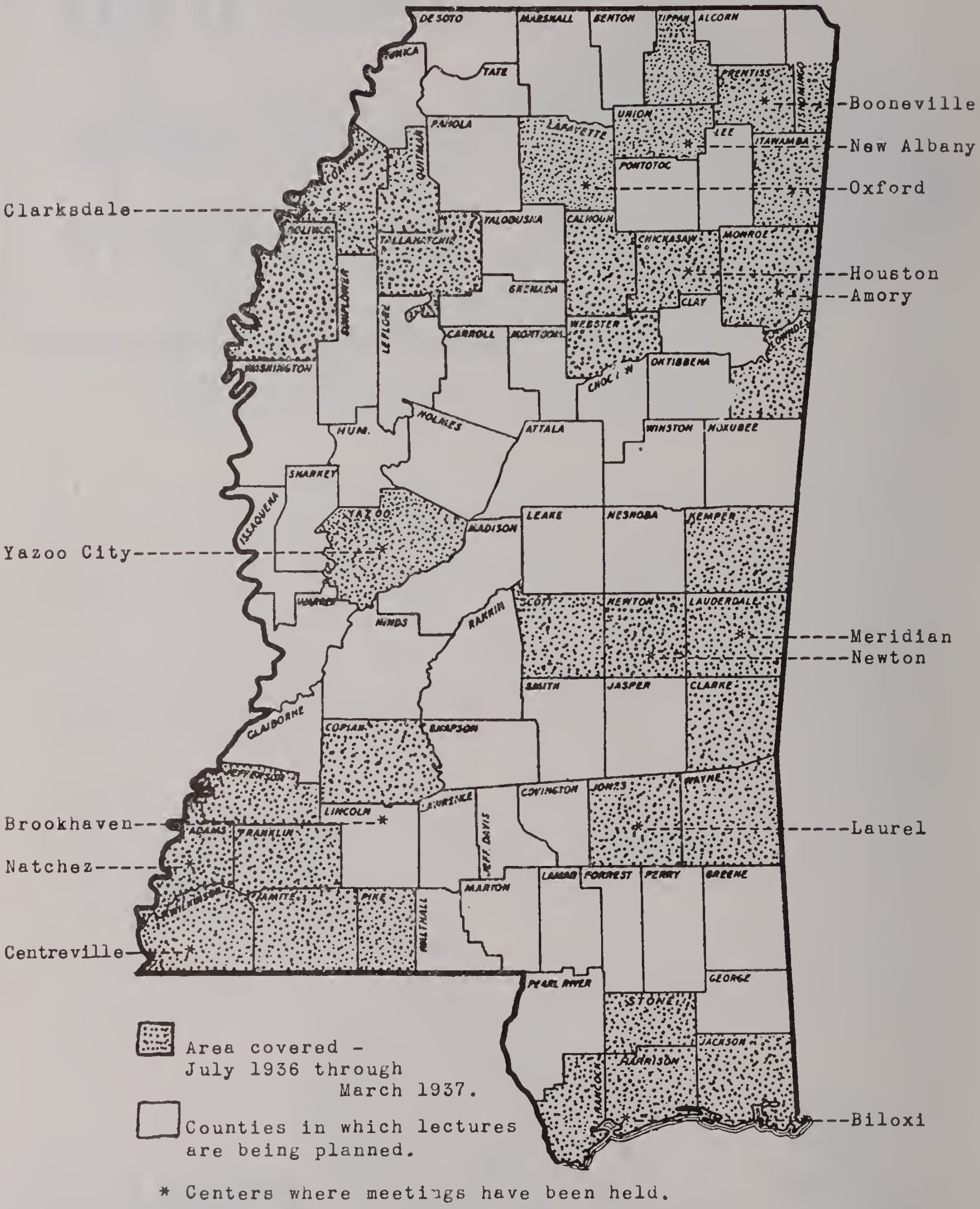

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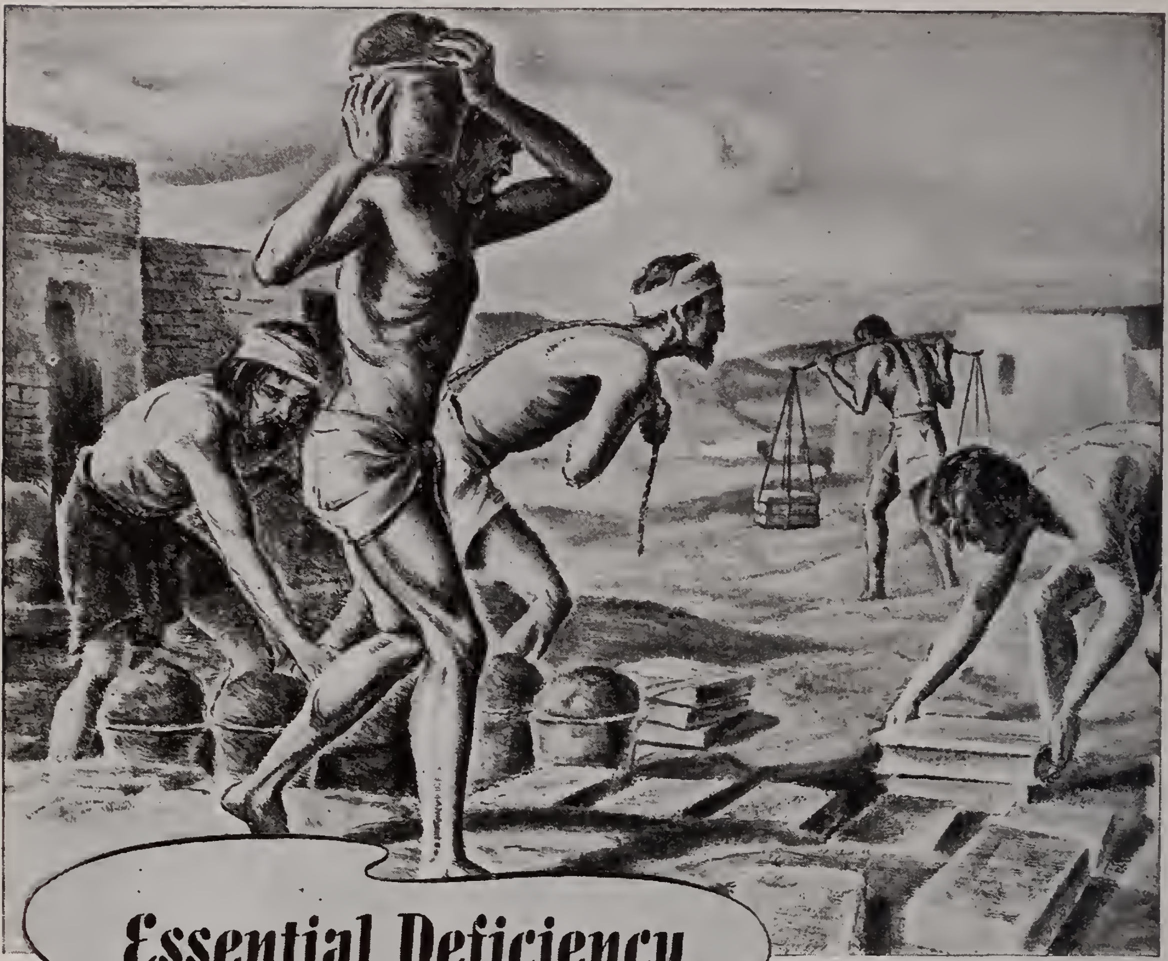

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Recent Advances in Endocrine Diagnosis and Therapy of Interest to the Man in General Medicine*

JAMES H. HUTTON, M.D.
CHICAGO, ILL.

Endocrinology possesses a voluminous and rapidly growing literature in which are contained relatively few facts of clinical importance. Man engaged in other fields of medicine must find it extremely difficult to separate these few facts from the extraneous material. For this reason I shall attempt to present this subject largely from a clinical point of view.

Progress in endocrinology may be discussed under the headings of

Physiology
New syndromes or changing concepts of old ones as regards their etiology and treatment
New fields for endocrine therapy
Diagnostic procedures
Therapeutic agents.

Physiology. The pineal has been added definitely to the list of endocrine structures by Hanson, who made from it an extract which Rowntree injected into immature rats and thereby produced precocious dwarfs—precocious in the development of the genitalia, teeth and fur, and dwarfs as to their somatic development[1]. The same workers[2] have shown apparently that the thymus is also an endocrine structure. An active extract appears to have been made from this structure which when injected into succeeding generations of immature rats produces an astonishing precocity in growth. It does not produce giants. These extracts are not available for general use.

New facts regarding the functions of the adrenals are being discovered from time to time. It is now fairly certain that the adrenals have some part in the metabolism of sulphur, calcium, pigment, sodium, carbohydrates, tissue respiration and potassium, and in the maintenance if blood volume. Knowledge regarding potassium seems to be of a negative nature; that is, administration to animals of an excess of potassium either precipitates symptoms of adrenal failure or exaggerates signs of adrenal insufficiency already present[3]. It has also been shown that eliminating sodium chloride from the diet of a patient suspected of adrenal insufficiency will oftentimes exaggerate the symptoms and so offer considerable data supporting this diagnosis. The exact role played by the medulla and the cortex in these metabolic processes has not been determined.

Posterior pituitary failure seems to have been established as responsible for diabetes insipidus[4]. It has also been shown that the posterior lobe probably plays an important role in the formation of the pressor, oxytocic and antidiuretic principles extracted from it[5].

A number of workers[6,7,8] have shown beyond the peradventure of any reasonable doubt that the pancreas is not the sole mechanism presiding over carbohydrate metabolism. Both the anterior and posterior lobes, as well as the adrenal cortex and medulla, have been shown to have an influence in this field.

The interrelationship of the pituitary, thyroid, adrenals and gonads has been established. From the anterior lobe a number of hormones have been extracted, notably the growth, thyrotropic, gonadotropic, adrenotropic and lactogenic. A large number of hormones have from time to time been attributed to this lobe, but the ones mentioned are those best established and it may be that the number will shrink still further. It has been shown that injections of estrogenic substances exert an inhibitory influence over at least some of the pituitary functions. The clinical application of this is illustrated by Mazer's statement[9] that injections of 2000 units of estrogenic preparations every fourth day rendered some of their diabetic patients sugar free and obviated the use of insulin. Barnes and Regan[10] had previously shown that injections of amniotin before pancreatectomy greatly reduce the severity of the diabetes which follows this procedure, presumably by inhibiting pituitary function.

---

*Prepared for the fifty-third annual meeting of the Mid-South Post-Graduate Medical Assembly, Feb. 16-19, 1937, Memphis, Tenn. Meeting canceled because of flood.

New Syndromes. Basophilism, described by Cushing[11] in 1932, is due to basophilic adenoma of the anterior lobe. It is characterized by a rapidly acquired and painful obesity limited to the face, neck and trunk, a marmorate condition of the skin, purplish striae in the groin, and ecchymotic spots on the legs. It is accompanied by headache, visual disturbances, backache, substernal distress and many times a lordosis or kyphosis due to absorption of calcium in the vertebrae. It is associated many times with diabetes mellitus and hypertension.

Shortly after Cushing described this, Wilder and his co-workers[12] described a condition similiar, if not identical, to it, which was associated not with pituitary adenoma but with adrenal cortical adenoma. In some cases the pituitary was reported as normal. Except when the adenoma either of the cortex or the pituitary is of such size as to be recognizable, there is now no way of determining when the condition may be due to a pituitary disorder and when to an adrenal cortical adenoma. The physiologists have shown that the pituitary and adrenals are so interrelated that when one is the seat of some pathologic process the other is almost certain to be adversely affected. It has been shown that the anterior pituitary is concerned even in Addison's disease. Clinically it is many times impossible to tell when a syndrome is due to adrenal and when to anterior lobe dysfunction.

Hyperparathyroidism was introduced to the profession only a few years ago. The symptoms are probably dependent in large part on the disturbance in calcium metabolism which accompanies it. It is usually due to tumor of one or more of the parathyroids. Calcium is nearly always at a high level in the blood stream and is excreted in large amounts in the urine. It is abstracted from the bones with resultant rarefaction and softening. Bone cysts and tumors frequently occur. Calcium deposits occur in the kidneys associated with polyuria and polydipsia. There is usually considerable pain in the bones and joints and loss of muscular strength. Treatment is entirely surgical and consists of removal of the tumor or one or more hyperplastic parathyroids. At one time it seemed that hyperparathyroidism was going to be blamed for a large amount of osseous pathology, but its boundaries are now better defined.

Hyperinsulinism is characterized by weakness, hunger, sweating, trembling and sometimes by epileptic-like seizures. These symptoms are associated with and probably due to a low blood sugar. This condition is commonly attributed to an overproduction of insulin by the islands of Langerhans. Some cases have been associated with a tumor of the pancreas, removal of which relieved the condition. In others no such tumor was found, but a portion of the tail of the pancreas was excised. This did not always relieve the condition. In some cases the symptoms of this disorder might better be explained on the basis of a pituitary and adrenal deficiency. The symptoms are those associated with such a disorder of severe degree and in some instances they have been relieved by the administration of preparations of these glands. Such disorders of mild degree are seen rather frequently in private practice and are usually associated with a pituitary or adrenal deficiency.

If one goes carefully into the history of many patients who complain of extreme fatigability and headache, he will be surprised to find that this often occurs either on arising early in the morning, in the late forenoon, or in the late afternoon. These are usually associated with a low blood sugar. However, if facilities for determining this point are not readily available, a therapeutic test can be made by asking the patient to take a lump of sugar on his tongue shortly before the time of the expected headache. This will often relieve these conditions. I have seen a number of patients whose headaches were relieved by taking a lump of sugar as soon as they awakened in the morning and again in the afternoon or shortly before meal time, if eating was to be postponed beyond the usual hour. Curiously, this procedure does not need to be continued indefinitely. The condition appears to be relieved permanently by following this procedure over a period of a few weeks.

Changing Concepts of Syndromes, Their Etiology and Treatment. There is an increasing realization that symptoms of the menopause are due not so much to withdrawal of the ovarian hormones per se as to a consequent imbalance of pituitary and adrenal function. The symptoms are really due to a hyperpituitarism and adrenalism. Nevertheless, they are treated successfully by the administration of estrogenic products, which probably act not merely as replacement therapy but as agents to inhibit the pituitary and, either directly or through the pituitary, the adrenals.

There is an increasing number of men who doubt that Graves' disease, or exophthalmic goiter, is primarily a disease of the thyroid and who are quite convinced that surgery is not the only, and in many cases not the best, treatment.

The pancreatic theory of diabetes is beginning to be seriously questioned as it is demonstrated that the pancreas is no longer solely responsible for carbohydrate metabolism. More will be said of this later.

Essential hypertension is considered now to have some endocrine component, and various surgical measures proposed for its treatment have, at least as one of their effects, the lessening of adrenal function. These measures consist of denervation of the adrenals[13]; bilateral section of the splanchnic nerves[14] or this procedure plus removal of the first and second lumbar ganglia and a resection of the adrenals[15]; excision of the celiac ganglion and denervation of the aortic plexus[16]; or simply removal of a section of the adrenals[17].

It is my belief that this condition and diabetes are very closely related, and it is impossible to study the literature carefully without being driven to the conclusion that their etiology must have one common denominator and that measures effective in the treatment of one should have a beneficial influence in the treatment of the other. It was my belief that these two syndromes were due in many cases to some functional abnormality of the pituitary and/or adrenals which could be controlled by low dosage irradiation of these two structures. This idea has been followed out now for something over four years. The results are summarized in the following tables:

TABLE I

Glucose Tolerance Tests on 136 Hypertension Patients

Blood sugar rose to 170-200 mg.	31
Blood sugar rose to over 200 mg.	55
Non-diabetic type of curve	50
	136

TABLE II

B. M. R. Determinations on 133 Hypertension Patients

Lower than minus 5 per cent	40
Normal	48
Higher than plus 10 per cent	45
	133

TABLE III

Hypertension and Diabetes

Improved as to both conditions	12
Improved as to hypertension only	7
Improved as to diabetes only	3
Unimproved	2
Insufficient treatment	5
Can't follow	2
	31

TABLE IV

Hypertension

Improved	135
Improved but relapsed	15
Unimproved	79
Insufficient treatment	40
Can't follow	21
	290

TABLE V

Hypertension Cases of Other Men

	Cases	Cases Improved
Martin	100	80
Baker	40	30
McGuffin	40	30
Finch	12	9
Konantz	6	3

Parkhurst	5	3
Hadley	44	4
Miscellaneous	56	47
	263	206

Regarding diabetes existing without hypertension: While this work was in progress Barnes[18] irradiated the pituitary and adrenals of a series of pancreatectomized dogs. He used the same machine and the same factors of treatment as were used in the treatment of our* patients. The severity of the diabetes was reduced on an average of 50 per cent. Barnes was of the opinion that most of the results were due to the effect of the irradiation on the adrenals.

Results in the treatment of human diabetes have not been so good as this experimental work indicated that they should be. However, a number of cases experienced marked improvement and were able to discontinue the use of insulin. Others showed some increased carbohydrate tolerance. Still others reported subjective improvement without any noticeable change in carbohydrate tolerance. Most of the cases showed very little improvement.

The symptomatic relief in cases of hypertension and of diabetes is many times out of proportion to the relief afforded either of these syndromes. Headache, tinnitus, vertigo, precordial distress, pains in the extremities and fatigability are particularly relieved. About 75 per cent of the patients state that they are more clear-headed and can think more rapidly. There is improvement in vision, a cessation of the blurring and an improvement in the retinal lesions observed in some cases.

A number of phenomena have been observed to follow these treatments, which are here recorded without attempt at explanation. A sedative effect follows these treatments in most cases, evidenced by a lessening of irritability and a decrease in the feeling of tension of which these patients complain. There is improvement in the character of the skin in that it tends to become smoother, softer and moister. In at least one instance there has been a loss of superfluous hair. There is an increase in physical endurance. A few well authenticated cases of Grave's disease, or hyperthyroidism, some of which had been operated two or more times without cure, have been entirely relieved by irradiation of the pituitary and adrenals without touching the thyroid.

A few cases have been observed in which cardiac compensation occurred after there had been considerable reduction in blood pressure and relief of symptoms. This was usually associated with a rise in blood pressure, and the pressure again fell after relief of the cardiac condition and further irradiation therapy.

New Fields for Endocrine Therapy. It might be said in a general way that the frontiers of endocrinology are being extended and that in some places it comes into conflict with older and better established forms of therapy. Examples of this are prostatic hypertrophy, sexual infantilism, gonorrheal vulvovaginitis in children and undescended testicle. In the last, surgery is being largely replaced by endocrine therapy.

The percentage of cures recorded in cases of undescended testicle varies with different writers but is considerable among even the most conservative. Results will probably be better as the pharmaceutical manufacturers are able to improve their product, particularly by giving us a more concentrated product, i.e., more units per c.c. It should be remembered that international units refer to weight and have no relation to the biologic units—mouse or rat[29]. Two preparations having the same value in international units may vary widely in biologic units and clinical activity. Every man would do well to familiarize himself with one product and stick to it most of the time. In treating undescended testicle most writers prefer to a series of about 20 injections of some gonadotropic preparation daily or alternate days and then wait 30 or 60 days before giving another course. The dose is usually about 100 rat units — the amount contained in 1 c.c. Better results might follow if larger doses were given, but there are some objections to this with the present preparations.

Gonorrheal vaginitis in children is treated more successfully by the use of estrogenic preparations than by any other method. These may be given hypodermically or as vaginal suppositories. TeLinde and Brawner[19] are of the opinion that the latter is the most effective method. They use one suppository containing 75 rat units each day.

---

*Most of this work was done at the Illinois Central Hospital. A number of men contributed patients to this series.

Lower and McCullagh[20] report relief of prostatic hypertrophy in 48 cases out of a total of 76 treated. They gave testicular material by mouth. Each patient received the equivalent of 60 Gm. of testes daily and this treatment was usually continued for a period of three months.

Sexual frigidity in the female is successfully treated in many cases by the use of gonadotropic hormone preparations. These should be administered in doses of 50 to 100 units (½ to 1 c.c.) daily or alternate days. Impotence in the male can many times be successfully treated by the same method. This is particularly true in men under 45. Treatment may need to be carried out over a considerable period of time. In men past 45 or 50 this treatment should be used with some caution as it may lead to prostatic hypertrophy.

Sterility in both sexes can sometimes be relieved by gonadotropic preparations. In the female this treatment is more effective if some estrogenic preparation is also administered.

Habitual miscarriage or threatened abortion can be prevented in some cases by the use of corpus luteum hormone, progesterone, or an extract of the corpus luteum. Glismann[21] reported a series of cases treated with a lipoidal extract of corpus luteum with satisfactory results. More recently Falls et al.[22] reported a series successfully treated with progestin.

Many cases of acne vulgaris in young girls yield quite readily to injections of gonadotropic preparations.

Diagnostic Procedures. Most endocrinopathies are accompanied by some degree of lymphocytosis. This tendency in my opinion is most marked in hypothyroidism. Uric acid is increased in the blood stream in pituitary deficiency. A low blood sugar and a low sugar curve during the glucose tolerance test occurs in most cases of pituitary deficiency. A high sugar curve during this test is seen in ovarian insufficiency. The blood cholesterol is said to be increased in hypothyroidism[23]. This is not always true, but when present is a bit of positive evidence.

Maliner's test[24] consists of the injection of 1 c.c. of adrenalin. This is said to accentuate heart murmurs, to localize them more definitely to the areas over which they should be heard, and to develop murmurs not usually heard.

The insulin test was suggested by Harrop and others[25] for a study of early or mild Addison's disease. The intravenous injection of very small doses of insulin is followed in such cases by prolonged and sometimes violent hypoglycemic attacks, which respond very indifferently to glucose either by mouth or by vein. The doctor who contemplates using this test should have his patient in the hospital.

Contraction of the visual fields frequently occur in pituitary deficiency even when not due to tumor.

By determining the bone age of children the x-ray becomes very useful in the study of hypothyroidism at ages when the B. M. R. is not very reliable. As decalcification and rarefaction of the bones occurs in hyperparathyroidism, pituitary basophilism and some cases of adrenal cortical adenoma, the x-ray is very helpful in a study of these endocrinopathies.

A host of pregnancy tests have been developed, practically all of which depend on the presence of estrogenic or gonadotropic substances in the urine. These tests are also useful in determining the presence of certain malignant tumors. In normal pregnancy the Aschheim-Zondek test becomes negative about two weeks after delivery. It remains positive two months after the expulsion of a hydatidiform mole. Mazer[26] says, "If it persists longer than two months, or reappears after it was repeatedly negative, the presence of a chorionepithelioma should be suspected even in the absence of abnormal bleeding."

Therapeutic Agents. The greatest and most confusing advance has occurred in this field. The A. M. A. in its recent book, *Glandular Therapy*,[27] devoted a chapter to ENDOCRINE PREPARATIONS. The most confusing section of this is that devoted to gonadotropic and estrogenic preparations. So far as I can determine, men are most confused by these two terms and consequently as to the indications for the use of either of these products. It should be remembered that gonadotropic preparations seem to be effective only in the presence of intact gonads. It is helpful to think of them as exerting a stimulating influence on the gonads, although this may not actually be the way in which they act. Some of the gonadotropic preparations are extracted from the pituitary itself. Examples of these are prephysin, gynantrin and maturity factors. Others are made from pregnancy urine. Examples of these are antuitrin-s and follutein. A. P. L. is extracted from the placenta. Those preparations not extracted from the pituitary are referred to as pituitary-like principles. They resemble in action and properties the pituitary sex hormone. They are not identical in action or other properties with those extracted from the pituitary. These products are useful in the treatment of: amenorrhea or oligomenorrhea; sterility; infantilism; undescended testes; dysmenorrhea; menorrhagia; delayed puberty; habitual or threatened abortion; cryptorchidism; aspermia; impotence; frigidity.

The estrogenic preparations exert their action directly on the genital tract and do not depend on the presence of intact gonads. For the most part they are made from the urine of pregnancy or amniotic fluids. They are useful particularly in the following conditions: symptoms of the menopause; gonorrheal vaginitis in children; functional dysmenorrhea; frigidity; hyperplasia of the breasts of the lobular type; premenstrual migraine; some cases of amenorrhea; functional sterility; infantilism; senile affections—kraurosis, pruritus, vaginitis.

The male sex hormone has been extracted from the urine and from the testicle itself, and has lately been synthesized. This product is marketed by the Ciba Company under the name PERANDREN. This is said to be useful in the treatment of impotence, prostatic hypertrophy and similar conditions.

There is an increasing use of non-endocrine therapy in the treatment of some endocrine disorders, notably those of the hyperfunctional type. For the most part these non-endocrine measures are either surgery or irradiation, as by radium or more often the x-ray. The latter is used with increasing frequency in the treatment of menstrual disorders, either amenorrhea, dysmenorrhea, menorrhagia or the symptoms of the menopause. It appears to be equally effective in all of these except the last and it is somewhat effective there. Irradiation can also be used in the treatment of hyperpituitarism whatever the form, whether it be gigantism, acromegaly or basophilism. Our experience indicates that it might well be used to prevent the occurrence of gigantism if the patient is seen early, and persistently and cautiously followed. Hyperparathyroidism is almost solely a surgical condition. The same is true of primary hypergonadism and of adrenocortical adenoma. Hyperpituitary states offer a choice of surgery or irradiation. The indications for each of these maneuvers can hardly be gone into at this time. While Wilder and others[28] report the relief of acromegaly by the administration of estrogenic substances in doses sufficient to inhibit pituitary function, this can hardly be expected to take the place of irradiation.

Finally, I should like to add a few remarks that I hope will be of interest to men engaged in general medicine. Progress of the experimental physiologists tends to substantiate beliefs long held by clinical endocrinologists. In the first place, it is almost certain that any endocrinopathy is a pluriglandular and not a monoglandular affair by the time it reaches the clinician. Experimentation has shown that it would be almost impossible for a condition to exist long enough to produce symptoms sufficient to bring the patient to the doctor without its becoming pluriglandular in nature.

Second, there is an increasing belief that many of these products are effective by mouth. My own belief is that the thyroid, pituitary, gonads and adrenals are effective by mouth. Lower and McCullagh[20] have shown in their series that orchic substance in sufficiently large doses by mouth is effective in relieving prostatic hypertrophy.

The B. M. R. has many times been allowed to play too large a part in our diagnostic studies. It is too generally assumed that the finding of a low B.M.R. is equivalent to a diagnosis of hypothyroidism. As a matter of fact, even lower readings are found in pituitary or adrenal deficiency, particularly the former, than in hypothyroidism. A therapeutic test will decide whether or not the thyroid is primarily at fault. If it is, the administration of thyroid will produce an amelioration of the patient's condition and a lessening of his complaints; if it is not, the administration of thyroid will be followed by an exaggeration of the patient's complaints or by the appearance of new ones, and he will be more miserable than before treatment was begun. In such cases, assuming the exclusion of non-endocrine conditions, the condition can usually be ascribed to pituitary or adrenal deficiency, more often the former, and the administration of antuitrin will usually bring about rather prompt relief. That is. the administration of ½ c.c of antuitrin will be followed by a feeling of relief, an increase in strength, and a temporary lessening or disappearance of the patient's complaints. At this time when expensive and laborious laboratory procedures are being advocated in the diagnosis of these disorders, a therapeutic test may serve quite as accurately and save the doctor's time and the patient's money. In addition, it is available to men anywhere regardless of their access to a laboratory.

The experimentalists have shown that the pituitary is really the king-pin of the endocrine system, and clinically it is likely that the pituitary is involved in 90 per cent of menstrual disorders.

Finally, I think it might be said that there is no general agreement and no final authoritative word as to the best method for the administration of gonadotropic and estrogenic preparations in the treatment of menstrual disorders so that any man puzzled by a case he has been called upon to treat will not be far wrong if he cautiously uses some pituitary sex hormone preparation. On a purely empiric basis we know that most endocrine deficiencies are better treated if to the specific medication indicated thyroid is added in doses just short of those necessary to produce some signs of hyperthyroidism.

John B. Murphy once said, "Let the patient tell the story and he will tell you what is the matter with him." That is more nearly true of endocrinology than of any other field of medicine. Nothing takes the place of a good history.

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Original Features in Arthroplasty of the Knee*

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One finds considerable difference of opinion among the best of surgeons as to the wisdom of mobilizing ankylosed knees. The problem is obviously more complicated in weight-bearing joints. The occupation and social status of the patient, as well as his temperament, are often determining factors in deciding whether or not to operate. When the hip and knee on the same side are both ankylosed, the advantages of arthroplasty are much increased.

Arthroplasty in cases of tuberculosis should be approached with a great deal of conservation and only when the roentgenogram shows evidence of complete disappearance of all disease and a complete homogeneity of bone structure throughout the operative field.

Murphy in 1904 reported his technic for arthroplasty of the hip, and in 1906, Hoffa[1] reported five arthroplasties of the hip (three by Rochet and two by Nelton[2]). From that time on, an increasing number are found in the literature. In fact, in my practice, arthroplasty has become so dependable and well regarded that whenever doing an operation to arthrodese a joint, if that case is a possible favorable case for future arthroplasty, I so plan my arthrodesing operation as to make it possible for the future operation to mobilize. Too, I prefer to take bone elsewhere rather than to disturb unduly perarticular structures or surrounding muscles by obtaining the bone graft material locally. At the knee, for the same reason, I no longer employ the patella as a source of arthrodesing material. After its diseased portion has been removed, the patella is left as intact as possible.

To the patient with bony ankylosis of the knee, a functioning joint with adequate mobility and stability is his object in seeking an arthroplastic operation, even more than at the hip. Whether or not the surgeon follows anatomic contours in modeling the new joint does not interest him, so long as the joint functions. It has been found by Allison and Brooks that it is absolutely impossible to duplicate experimentally, or in surgically constructed joints at the knee, the normal gliding of the articular bone surfaces. This being true, and as attempts to approximate the contour of the normal are so often followed by lateral instability, consisting of lateral buckling due either to capsular laxity or to sidesslipping of one joint surface on the other because of irregular wearing of joint surfaces, in 1920, I devised technic[3] based on well-known mechanical principles, which ignores the normal contours of the joint and provides both mobility and stability. It has given excellent results.

In separating the tibia from the femur and in the bone modeling with V-shaped incisions replace the usual attempts to follow body contours when viewed anteriorly. The convex wedge-shaped plane surfaces of the femur fit accurately into the concave wedge-shaped plane surfaces of the tibia. Weight-bearing forces the apex of the wedge-shaped end of the femur so firmly into the tibia that the danger of lateral instability is practically eliminated, and a definitely improved prognosis is afforded.

Up to nine years age, my own attitude concerning arthroplasty to produce mobility in bony ankylosed knees was one of great conservatism, both because of personal experience and because of observations which I had made on results of others. Either those patients had insufficient motion to satisfy them or, more often, the degree of mobility was satisfactory but lateral instability was present and proved so troublesome as to offset the advantages of mobility.

The Position of Ankylosis:

Extreme flexion is unfavorable to arthroplasty because it makes the technic very difficult and necessitates extensive removal of bone and the sacrifice of that portion of the tibia and femur which has the largest diameter, thus tending to produce lateral instability. If the knee is markedly flexed, it is advisable to perform a preliminary supracondylar osteotomy.

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*Read before the Gulfcoast Clinical Society, Oct. 16, 1936.

Five years ago, I would have said that ankylosis in extension was best left alone; but, in view of the constantly improving results from arthroplasty, I believe that the patient should be given the benefit of the latter, unless there are definite contraindications.

The condition of neighboring joints should also be considered. If both knees are ankylosed, arthroplasty on one is definitely indicated; or, if the knee and hip on the same side are ankylosed, there should be slight reason for hesitation.

To women, the awkwardness of ankylosis is more annoying than to men, and in young women ankylosis often proves a distinct handicap socially. For both men and women, the nature of their profession or occupation will often determine how essential mobility of the knee is to them.

In few operations is the absolute cooperation of the patient so essential as in arthroplasty. However perfectly the technic may be executed, a good functional result cannot be obtained unless the patient submits with patience, courage and intelligence to the long post-operative treatment, which is likely to be slightly painful in the first stages and is always tedious. It is wise to test the patient's nervous stability by telling him this in advance and to let his reaction to such a statement be an indication for or against the operation.

All persons of weak will or of excessive nervous instability and those who have a litigation interest in not getting better, such as certain compensation and accident cases, must be eliminated if the surgeon does not wish to risk unnecessary failures.

Age and Sex:

Age and sex are not vital factors, although patients under eighteen years are sometimes difficult to manage after operation; the operation should never be done on young children and patients over fifty have not the same degree of resistance. It has been stated by some authors that men are more favorable subjects than women, but this has not been my experience.

Technic of Choice:

A tourniquet is applied well up on the thigh, so as to allow post-operative application of plaster-of-Paris before the tourniquet is removed.

The knee is approached by a U-shaped incision in the skin and soft parts from the inner and outer aspects downward to just below the tubercle of the tibia. The concavity is upward. This U incision gives the surgeon absolute uninterrupted access to all parts involved in the formation of the new joint, and is, therefore, distinctly superior to the lateral approach. Also, it does not interfere with the important extensor apparatus above the knee as is likely to happen with the inverted U incision or lateral approach.

The technic of arthroplasty should be so designed as to allow passive and active motion at the earliest possible moment without danger of separation of important structures. As the free gliding of the soft structures of "extensor apparatus" just above the knee-joint is absolutely essential to free motion and active control, the severing and resuturing of these structures, as in the inverted U incision, are to be avoided; for, if they are severed not only is there danger of union being insufficient when one wishes to start exercise and passive motion as early as two weeks after operation, but, because of the cross-section severance, there is danger of adhesions at this point between the gliding intramuscular and tendinous tissues. These considerations lead me to choose an incision that does not section or traumatize these soft structures above the knee and to turn the patella upward rather than downward, as advocated by some.

When the knee is being opened up, care should be taken to leave the skin flap overlying the interior work as thick as possible, so that the skin and line of suture will not break down following the operation.

Before the patella is turned upward, the ligamentum patellae is detached with a generous amount of bone from the region of the tibial tuberosity, and included in the dove-tail manner. First, two holes for later insertion of Kangaroo tendon are drilled, one through the tibial tuberosity and one slightly posterior to it. Then, by means of the motor-saw and small drill, the tubercle of the tibia is removed with the ligamentum patellae, and the patella is turned upward. This bone plastic work is done very rapidly with the motor-saw, and because of the dove-tail mortise conformation and the rapid union of closely fitted broad bone surface to bone surfaces, the surgeon need not question the detachment of the ligamentum patellae,—a question that has been raised by Mac Ausland, who considers in inadvisable to sever or disturb the patellar tendon or its attachment. It is distinctly preferable to detach this tendon, as trying to work around it involves unnecessary trauma to neighboring tissue, slows up the operation and limits access to the joint.

It is well known that bone unites to bone more readily and more firmly than tendon to tendon or fascia to fascia. My method of detaching the ligament takes advantage of this, the dove-tail mortise conformation being a further assurance of prompt union and of the prevention against the pulling away of the tendon from the tibia even when bony union has not taken place. Also, prompt union obviates delay in the application of post-operative physical therapy, which should follow within three weeks after the arthroplasty. In marked contrast to this is the union of a severed tendon to tendon, which is both slow and unreliable.

After the ligamentum patellae has been thus detached, the soft tissue and capsule are dissected from the ankylosed joint to which they have become amalgamated, and the whole mass,—patella, quadriceps and soft parts,—is turned upward, exposing completely the anterior and lateral surfaces of the junction of the tibia and femur.

At this juncture the gliding of the lower part of the quadriceps muscle, its tendon on the lower end of the femur is tested, as well as their length. If this tendon muscle does not glide up and down satisfactorily and is not of sufficient length, plastic work should be done to lengthen the tendon as well as to bring about its satisfactory gliding on the lower end of the femur. This is a very important feature of the operation, because the tendon is not long enough to allow post-operative flexion, or if the quadriceps tendon is not free, serious interference with post-operative physical therapy or mobilization of the joint will occur.

It has been my practice to remove all immobilizing splints at the end of three weeks and to institute active and passive motion. If the quadriceps tendon were severed, this early post-operative treatment would certainly jeopardize the union. Again, the severance of the quadriceps muscle and tendon and the dissecting downward of the distal portion seriously involve the gliding structures above the patella, which may not have been damaged or destroyed by the original pathologic changes that produced the ankylosis.

After the patella, quadriceps and soft parts have been turned upward en masse, one is ready for the bone arthroplasty. With a broad osteotome parallel, broad V-shaped incisions with the apex downward are used in modeling the joint anteriorly and posteriorly.

The lower end of the femur as viewed from its anterior surface, is shaped into a wedge with an angulation of 120 degrees between its plane surfaces. This leaves the tibia concave plane surfaces at an angle of 120 degrees to each other. These are in turn carefully modeled so as to receive with accurate fit the convex wedge-shaped surface of the femur. This is one of the original features of the operation and is an effective measure in the avoidance of lateral instability, in that, from a mechanical standpoint, weight-bearing forces the wedge contour of the lower end of the femur into the corresponding wedge-shaped cavity of the upper end of the tibia. This peculiar contact practically insures stability, and consequently an unusual amount of laxity can be permitted by the removal of an ample amount of bone. A generous amount of bone, particularly at the posterior part of the joint, is removed from what was the tibia and femur and the remainder is so shaped that it will imitate as far as possible the normal contour of the joint. Great care should be taken not to leave any blocks of bone attached to soft parts in the popliteal space because of the danger of their acting after operation as osteogenic material. It must be remembered, of course, that the removal of too much bone will favor instability, but the wedge-shaped method just described markedly diminished this possibility. Great care should be taken to leave the bony surfaces as smooth and plain as possible to facilitate gliding. This is usually best accomplished with a sharp, 1½ inch octeotome, but a file may be used, if necessary. A close study of the conformation of the bony surfaces of the new joint should be made in order to shape them most favorably for the function of the joint motion. The proper conformation of the joint should then be tested by flexing the knee to beyond a right angle. Free motion without impingement at any point should be striven for, before the free fascia and fat graft are obtained. To insure this the patellar ligament with its dove-tail bone fragment is replaced temporarily in the original mortise bed.

The joint is again flexed cautiously to at least a right angle, to check up on the contours and to insure free excursion of the quadriceps tendon and muscle, so that post-operative physical therapy will not be prevented from securing the desired motion.

The joint is then packed with hot saline compresses, while a rectangular graft of fascia lata fat is being obtained from the central portion of the outer aspect of the thigh. Being a semifluid substance, the fat under pressure after joint closure practically flows into the cavities and absolutely fills up all intra-articular dead spaces, thus preventing the formation of hematoma. For this reason the inclusion of fat with the fascia lata graft seems to me very valuable and I cannot agree with those who advocate the use of fascia lata alone.

If sufficient fat can be obtained with the fascia, the superior portion of the graft is split and the undivided portion placed between the tibia and the femur. The fascial portion of the split end is turned upward and inserted between the lower end of the femur and the quadriceps tendon and the patella, while the fatty portion is turned downward and placed between the upper end of the tibia and ligamentum patellae and the patella. The graft is sutured with chromic catgut number 1 to the remains of the capsule and soft tissues. The remains of the capsule are then sutured medially and laterally with chromic catgut number 1, the skin is closed with plain catgut number 0, and sterile dressings are applied.

Moleskin straps are applied medially and laterally to the lower leg for traction and a cast is applied, so constructed as to allow for traction by means of the moleskin. The tourniquet is not removed until the plaster, applied from below upward, has reached it. Removal of the tourniquet before closure of the wound is to be condemned in that in an arthroplasty there are such broad surfaces of raw bone that the large amount of bone ooze cannot be controlled by ligature. Careful observation shows that a larger amount of bleeding will come from the cut bone surfaces than from the small blood-vessels, which will escape ligature if the tourniquet is left on. The compression and immobilizing effect of the well molded plaster-of-Paris with all joint spaces filled with the fat and fascia graft acts as a marked hemostatic influence, and it is, therefore, preferable to leave the tourniquet on during closure of the wound and the application of the cast ,thus preventing the very considerable oozing from the bone surfaces which would occur were it removed. The hazard of hematoma is a real one and should be carefully guarded against.

A pulley and traction apparatus on the bed must be ready for immediate application when the patient returns from the operating room. The patient is held completely under the anaesthetic until traction of 15 pounds (68 Kg.) is well established on the limb. This is done to prevent muscle spasm, which is likely to occur as the patient comes out from under the anaesthetic, and which might cause the approximation of the bone surfaces and the crushing of the fascia and fat graft between the bone surfaces. The latter might be a real calamity, leading to re-ankylosis.

This traction is continued for at least a month and a half after the plaster has been removed and the massage begun. Even after the patient goes home, the traction is maintained throughout the night, although during the day the patient is allowed to walk with crutches, without weight-bearing, the latter not being permitted until at least two months after operation.

It has not been found necessary with my technic to reinforce lateral ligaments by secondary operation as in every case the joint has had the most satisfactory lateral stability. I have in several cases done secondary operations to sever restricting bands of fascia or scar tissue lateral to or above the patella which were limiting mobility.

Pain does not usually persist after the first series of post-operative physiotherapy treatments. The muscles gradually regain their ability to contract, even if they have been inactive for years; the reflexes reappear; the different types of sensation,—superficial and deep, and sensation of position, are at length re-established. The nearthroses possess still another characteristic; once established, they are never the seat of effusion or of swelling. They seem to be resistant to all hemotogenous arthritic processes.

Prognosis:

With proper selection of cases, meticulous attention to technic and intelligent post-operative physical therapy, the prognosis for arthroplasty of the knee is good.

With regard to the advisability of operating on a bony ankylosis due to tuberculosis, there is the greatest difference of opinion. I believe that arthroplasty should be approached with due conservatism in such cases, but not pessimism. If in the roentgenograms, which should be taken in several planes, there are evidences of relief pockets or cavity formation, or areas of extreme osteoporosis, the case is unfavorable; but if the bone structure appears fairly uniform and there are no other unfavorable conditions, arthroplasty should be successful. Some of my most brilliant results have been in cases of healed tuberculosis. It should be emphasized, however, that all vestiges of the original tuberculosis process must have been entirely eliminated for at least four years before this operation is attempted and the roentgenograms should show an unusual hemogeneity as to structure of the bone through the joint area. At least one year should have elapsed since the last symptom of the infection was pyogenic in character. It is rarely wise to operate in cases of arthritis deformans.

Next to the hip, arthroplasty of the knee has made the greatest strides during the last decade, and such operations on both joints should be recognized as a trustworthy surgical procedure.

Indications for Arthroplasty:

Those who have had the widest experience and the greatest success with arthroplasty are unanimous in urging careful selection of patients. In so doing, the following points should be considered:

1. The original cause of the ankylosis;
2. The position of ankylosis (flexion, extension, hyperextension);
3. The condition of the patient; not merely the general physical resistance but the condition of the soft parts overlying the joint. Extensive scar tissue, if it cannot be replaced with healthy tissue, is very unfavorable.;
4. The psychic, social and occupational factors must all be weighed.

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Ephraim McDowell and Jane Crawford*

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Mr. Chairman, Ladies and Gentlemen: In obedience to established precedence and in accordance with my own sentiment, I desire to express my grateful acknowledgement of the honor conferred upon me in connection with this occasion.

It has been more than half a century since I last saw this place and the memories that remain are like a dream. I can only capture the faint outlines as they flee in indistinct forms across my field of vision. There are a few names that still linger in my memory like Caraway, Miller, Davenport, Peeler, Walker, Boone, Perkins, Taylor. For me to be here this evening seems more like a leaf from the book of a fairy story than an experience in real life. Of course you are not interested in my personal history more than to know that I am proud to be here and to look into the faces of the descendents of those who played a part in my infant pleasures and ambitions. The constantly recurring contacts like these constitute the most joyful occasions of our lives.

The subject of my address is one that ought to appeal to the public as well as the profession. It has the elements of heroism of both to recommend it. Nothing could equal the supreme self-confidence and courage of McDowell or the simple faith and Christian fortitude of Mrs. Crawford. They will stand as examples worthy of emulation throughout all time. Too much cannot be said in their praise. The doctor and the patient are equally deserving of our admiration as the greatest benefactors the human race has ever known. I welcome every opportunity to lay a laurel upon their brows and to publicly acknowledge the obligation we owe to the skill and courage of one and the fortitude and faith of the other.

McDowell's name has fallen in reverence from more lips and has been spoken in grateful accents and terms of affection in more different languages than any that ever graced the commonwealth of Kentucky and Mrs. Crawford has furnished the world an example of the model patient. Kentucky has been so abundantly blessed in the distinction of her sons and daughters that even without McDowell she would prove a dangerous if not a successful rival in a contest for like supremacy against any other state in the union. But it shall not be the object of my effort to hold up for your contemplation the glittering surface of McDowell's fame nor dazzle your vision with the resplendent radiance of his immortal genius, nor shall I attempt to marshal in parade the shining attributes of his noble character to challenge your admiration and win the plaudits of your pride. That is a theme that has engaged the tutored skill and superb talent of the art of character deliniation and biographic narrative, and upon which many have wrought with rare and unusual charm and unparalleled success.

It would be an unpardonable conceit in me with my crude and unlettered faculties to presume, to amplify their labors or to adorn their efforts. I refer more particularly to the essay of Dr. John D. Jackson of Danville, Kentucky printed in 1873 by the Louisville and Richmond Medical Review. In this we find the most intimate and personal tracings of McDowell's career. Dr. Jackson was better qualified for this task than any of McDowell's biographers, because, in addition to his literary qualifications, which were of the highest order, and his accomplishments as a scholar, he possessed the advantage of practicing medicine and living among the very same people that McDowell served. He labored in the master's vineyard. To him belongs the credit of being the first to propose a monument to be erected by public subscription to McDowell's memory. Also the address delivered by Dr. Samuel D. Gross, "the author of American surgery," upon the dedication of McDowell's Monument in May, 1879. Gross' eulogy on that occasion was a classic of its kind and reflects tremendous credit both upon the author and the object of his praise.

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*Read before the Northeast Mississippi Thirteen-County Medical Society, Booneville, Miss., March 16, 1937.

In December, 1909, Dr. Louis McMurtry, who has the facile princeps of his period, both with the scalpel and the pen, delivered the address at the centennial celebration of McDowell's first ovariotomy, which was held by the American Society of Obstetricians and Gynecologists.

These three gifted apostles of science and letters adequately tell the story and amply reflect the glory of McDowell, his useful life and his notable achievements. I shall, therefore, be content if I can by some elucidation draw your attention to the matured product of his labor—Modern Abdominal Surgery— an art which stands todav in the realm of science as a comparison to the monarch of the forest beneath whose grateful umbrage countless thousands have sought refuge and found relief from their sufferings and deliverance from their afflictions. It was McDowell who planted the seed in the wilderness and nursed the tender sprout with maternal care and vestal vigilance until the succeeding sapling became so firmly rooted in the soil of truth and toughened in the fiber of fact until it resisted and defied the skepticism of the incredulous, the thunder of authority and the bolts that were hurled against it from the seats of the mighty. Even at the risk of tiring you with the tedium of a twice-told tale, I find it essential to my purpose to present a brief survey of the progress and development of abdominal surgery, which is the matured, but not the finished product of McDowell's genius. Beginning with his first ovariotomy, which he performed for Mrs. Jane Todd Crawford in December, 1809, I can do no better than submit his own report as published in the Philadelphia Eclectic Repertory and Analyticals Review of October, 1816, and a letter written Janurary 2, 1829, to Mr. Robert Thompson, a student of medicine in the University of Pennsylvania.

"Case I: In December, 1809, I was called to see a Mrs. Crawford, who had for several months thought herself pregnant. She was affected with pain similar to labor pains, for which she could find no relief. So strong was the presumption of her case, requested my aid in delivering her. The abdomen was considerably enlarged, and had the appearance of pregnancy, though the inclination of the tumor was to one side, admitting of an easy removal to the other. Upon examination, per vaginam, I found nothing in the uterus, which induced the conclusion that it might be an enlarged ovarium. Having never seen so large a substance extracted, nor heard of an attempt or success attending any operation such as this required, I gave to the unhappy woman information of her dangerous situation. She appeared willing to undergo an experiment, which I promised to perform, if she would come to Danville, the town where I live, a distance of sixty miles from her place of residence. This appeared almost impracticable by any though the most favorable conveyance, though she performed the journey in a few days on horse back. With the assistance of my nephew and colleague, James McDowell, M. D.;, I commenced the operation, which was concluded as follows:

Having placed her on a table of the ordinary height, on her back and removed all her dressing which might in any way impede the operation, I made an incision about three inches long, from the musculus rectus abdominis, on the left side continuing the same nine inches in length, parallel with the fibers of the above name muscle, extending into the cavity of the abdomen, the parietes of which were a good deal contused, which we ascribed to the resting of the tumor on the horn of the saddle during the journey. The tumor then appeared full in view, but was so large that we could not take it away entire. We put a strong ligature around the Fallopian tube near to the uterus; we then cut open the tumor, which was the ovarium, and the fimbreated part of the Fallopian tube very much enlarged. We took out fifteen pounds of dirty, gelatinous looking substance; after which we cut through the Fallopian and extracted the sac, which weighed seven and one half pounds. As soon as the external opening was made, the intestines rushed out upon the table,and so completely was the abdomen filled by tumor, that they could not be replaced during the operation, which was terminated in about twenty-five minutes. We then turned her upon her left side, so as to permit the blood to escape, after which we closed the external opening with the interrupted suture, leaving out at the lower end of the incision the ligature which surrounded the Fallopian tube. Between every two stitches we put a strip of adhesive plaster, which, by keeping the parts in contact, hastened the healing of the incision. We then applied the usual dressing put her to bed, and prescribed a strict observance of the antiphlogistic regimen. In five days I visited her, and much to my astonishment found her engaged in making up her bed. I gave her particular caution for the future and in twenty-five days she returned home, as she came in good health, which she continues to enjoy."

Danville, January 2, 1829

Mr. Robert Thompson, Student of Medicine
No 59 Spruce Street
Philadelphia, Pennsylvania.

Sir:

At the request of my father I take the liberty of addressing you a letter giving you a short account of the circumstances which lead to the first operation for diseased ovary. I was sent for in 1809 to deliver a Mrs. Crawford near Greentown of twins, as the two attending physicians supposed. Upon examination per vagina I soon ascertained that she was not pregnant, but had a large tumor in the abdomen which moved easily from side to side. I told the lady I could do her no good and candidly stated to her her deplorable situation; informed her that John Bell, Hunter, Home, and Wood, four of the first and most eminent surgeons in England and Scotland had uniformly declared in their cases that such danger of peritoneal inflammation, that opening the abdomen to extract the tumor was inevitable death. But notwithstanding this, if she thought herself prepared to die, I would take the lump from her if she could come to Danville. She came in a few days after my return home and in six days I opened her side and extracted one of the ovaries, which from its diseased and enlarged state weighed upwards of twenty pounds. The intestines, as soon as an opening was made, ran out upon the table, remained out about twenty-five minutes, and it being Christmas Day they became so cold that I thought proper to bathe them in tepid water previous to my replacing them. I then returned them, stitched up the wound and she was perfectly well in twenty-five days. Since that time I have operated eleven times and have lost but one. I have uniformly cut the ring open, put the intestines up if down, thus cut the ring all round every quarter of an inch, then propped the parts closely together and in every case the cure has been perfect. Therefore, it appears to me a mere humbug about the danger of the peritoneal inflammation so much talked about by most surgeons.

Wishing you health and happiness, I am

Yours sincerely,
E. MCDOWELL

These letters were copied from "Medical Pioneers of Kentucky" by Dr. J. N. McCormack and from which most of my information concerning McDowell and his followers was derived.

The most remarkable trait of character displayed by McDowell in Mrs. Crawford's case was his unreserved candor in stating the possibilities of her proposed operation. He frankly tells her that the four leading surgeons of England and Scotland pronounced the invasion of the peritoneal cavity as equivalent to certain death and proposed that if she was prepared to die to come to Danville and he would operate. McDowell's candor and frankness on this occasion is only equalled by Mrs. Crawford's dauntless courage and valiant spirit. For she not only accepted the hazards of an experimental operation, one that had never been tried before, but subjected herself to very grave and serious hardships to have an opportunity to do so. For example she rode horseback a distance of sixty miles through an almost trackless forest in the month of December when the weather must have been cold and inclement, being at the time burdened with an abdominal tumor weighing twenty-two pounds, in order that she might test with her own life the mysteries of an untried, unknown, unauthorized operation—a procedure that had been repudiated by the highest constituted authorities of the day and age. She knew full well she must endure the ordeal in full possession of her faculties. There was to be no blissful sleep to obtund the pain as the keen edge of the knife cut through her palpitating flesh, to say nothing of hemorrhage and subsequent infection which he had explained to her.

The whole picture is one of courage, fortitude and faith that is unparalleled in the annals of medicine and utterly passes my comprehension. No doubt there was the solicitude of friends and relatives to be reckoned with and declined. Their advice and warnings and fond farewells had to be ceartfully received and regretfully considered. If their gloomy forebodings had been realized in a fatal outcome what a calamity it would have been to befall humanity;abdominal surgery retarded at least one hundred years. After a few days' rest the operation was performed and in five days, to the astonishment of McDowell and her attendants, she was out of bed and "tidying up her room."

In 1816, seven years later, McDowell sent a report of Mrs. Crawford's case and two others, all successful, to Dr. Physick, Professor of Surgery in the University of Pennsylvania, and to Dr. John Bell, his preceptor in Edinburgh.

The copy sent to Dr. Physick was contemptously ignored, but the manuscript fell into the hands of Dr. James, Professor of Obstetrics, by whom it was read without comment to the class and later published in the October, 1816, issue of the Philadelphia Electric Repertory and Analytical Review. The copy, which he sent to John Bell never reached him, as he was on the continent at the time and died before returning to Scotland. The manuscript, however, fell into the hands of Mr. Lizars who had it published in 1825 in the *Edinburg Review,* which was nine years after its appearance in America, a circumstance that illustrates how slowly knowledge was diffused in those days.

When the publication of McDowell's first group of ovariotomies was received in London, *The Medico Chirurgical Review,* was, as Gross says, especially "savage and satirical" in its editorial comments. The editor absolutely denied McDowell's right to have his claims considered and dubbed his a backwoods surgeon. He could not imagine such a person being the pioneer in a new branch of surgery. When told of McDowell's first case and her rapid recovery, he held up his hands in holy horror and in tones of outraged dignity exclaimed, "Credat Judocus non Ego." In 1827, eleven years later, he published the following apologetic reference:"There were circumstances in the narrative of some of the first cases that raised misgivings in our minds for which un-"charitableness we ask pardon of God and of Dr. Ephraim McDowell of Danville," quite a belated acknowledgement I should say—so much so as to make it appear ungracious.

The history of abdominal surgery might, with some advantage, be divided for study into four eras: The McDowell Era, The Anaesthetic Era, The Antiseptic Era, The Aseptic Era.

The McDowell Era extended from 1809 to 1829, during which time little was done aside from McDowell's own work, which consisted of twelve cases with four deaths. One successful case was done by Dr. Nathan Smith of New Haven, Conn.; one by Dr. Alan G. Smith, partner of McDowell's, in 1823; one by Dr. David L. Rogers, New York, in 1829. In 1825 Dr. Lizars of Edinburgh published four cases with three deaths. This mortality was sufficient to throw the operation into disrepute on the other side of the Atlantic, which, indeed it did as nothing more was attempted until nearly twenty years later. It is quite a notable fact that McDowell's record of 33 1/3 per cent mortality remained, with one exception, unexcelled until the dawn of the antiseptic era. There was an interim of twenty years from 1823 to 1843 when this young giant seemed to slumber. The only signs of life were a fitful dream or two in the early watches of the night, but it was the sleep of a healthy, vigorous child growing into robust adolescence.

In 1843, the dawn of anaesthesia, the awakening came. The renaissance prevailed through the efforts of Mr. Charles Clay of Manchester, England, and Mr. Frederick Bird of London, also the Atlee brothers, John and Washington, of Philadelphia. They were quickly reinforced by Taylor Bradford of Kentucky, Alexander Dunlep, of Ohio, Gaillard Thomas, Gilman Kimball and Briggs, of Nashville, Spencer Wells, of London, and Thomas Keith of Edingburgh. The time was most propitious because the discovery of anaesthesia by Crawford Long of Georgia, in 1842, "crashed the barrier," and supplied a powerful impetus to all surgery that could not restrained. As Holmes so beautifully expressed the idea: "The fiercest extremity of suffering has been steeped in the waters of forgetfulness and the deepest furrow in the knotted brow of agony smoothed away forever."

As a result surgical enthusiasm compromised and in some instance completely blinded surgical judgment and surgical mortality rode a rather high horse. Dr. Taylor Bradford, of Augusta, Kentucky, was the only operator who excelled McDowell's record. He reported thirty ovariotomies with three deaths, a mortality of 10 per cent. Anaesthesia had vastly increased the number of operations without reducing the death rate. In fact, the death rate of all major operations prior to the use of antiseptics, with the exception of lithotomy, was 33 1/3 per cent.

I might add here that the revival of ovariotomy met with sterner and more determined opposition both from the profession and the public than its origin ever did. Even the great Benjamin Dudley wrote a letter to Dr. Bradford clearly voicing his disapproval and Mr. Clay in England writes that he "had to wade through much vexatious opposition, great misapprehensions and gross misunderstandings." And Washington Atlee says he was everywhere derided, denounced by the general profession, the medical societies, medical colleges and by his own colleagues, misrepresented before the public and pointed out as a dangerous man and murderer.

The antiseptic era began about 1870, although Lister published his early work in 1865. In 1878, Sir Spencer Wells admitted that he believed "the antiseptic system would certainly reduce mortality and expedite convalescence," and Mr. Keith by "observing the most rigid rules of antisepsis" was enabled to perform 49 successive ovariotomies without a death; while Gross persisted in his declaration that the reduction of mortality was due to increased experience and greater skill. He made the statement that "surgeons of prominence on neither side of the Atlantic have little, if any, faith in Mr. Lister's carbolic acid system" and about the same time another one of America's foremost surgeons was proclaiming in clarion tones the antiseptic system "would never die because it was already dead." Despite all these authoritive denunciations and proclamations, surgical mortality rapidly declined to 10 per cent under the protecting ageas of antiseptics.

In 1880, Mr. Lawson Tait, of Birmingham, introduced the aseptic system, which further reduced mortality to 5 per cent, and in 1900 Halstead came forward with rubber gloves, which is an elaborated detail of aseptic surgery. Then the mortality fell almost to the vanishing point.

It is impossible to estimate the years of life and usefulness and happiness that have been extended to women by the operation instituted by McDowell. In 1870, Edmund Peasley estimated that 30,000 years had been added to the span of life for women in America and Great Britain alone. Up to 1850 only fifty ovariotomies had been done including the twelve cases reported by McDowell. There are five names that are inseparately linked with the four eras above referred to and they shine like lighthouses on a dangerous coast. To the McDowell era there is nothing but McDowell, unless you include Mrs. Crawford. To the antiseptic period Joseph Lister is the patron saint. To Lawson Tait we owe asepsis, which has permitted surgeons to explore with impunity the most remote and sacred recesses of the body. To William Halstead we are indebted for rubber gloves, which not only remove the last vestige of legitimate risk of infection to the patient, but throws the boon of protecion about the surgeon himself. Of the five men mentioned in this connection, three are American and all three, if alive, would geographically belong to the Southern Medical Association.

It would hardly be fair to the subject of our discourse to speak entirely of his work and nothing of the man himself. Ephraim McDowell came of a lineage of which he might well be proud. His father was Judge Samuel McDowell, a member of the Virginia house of Burgesses, and his mother was Sarah McClung, one of the real F. F. Vs. Ephraim was born in Rockbridge County, Virginia, on November 11, 1771. In 1773, when he was two years old, his father was appointed to the position of land commissioner of Kentucky, then a part of the Old Dominion. The common wealth of Kentucky was then an uncharted wilderness and the pioneers were very busy earning for her the pseudonym of the dark and bloody ground. The crack of the rifle and the scream of the bullet and the howl of the savage mingled their tones in unholy music to break the stillness of her silent glades.

Amid scenes like these, where courage, resourcefulness and self-reliance decided the issues of life and death, our hero grew to adolescence. He imbibed from the atmosphere of his environment those qualities of mind and body, that matured into the man of independent thought and decisive action, who could be bold, conservative or crafty as occasion required.

His early education was obtained at private schools in Georgetown and Bardstown, Kentucky. When he decided to adopt medicine as a profession, he entered the office of Dr. Humphrey, of Staunton, Virginia, as a student. He remained there two years, and Dr. Humphrey, being a graduate of the University of Edinburgh, and, being possessed of ample means himself, naturally he chose that institution as his alma mater. He spent two years in Edinburgh studying in the University and as a member of the private class of Dr. John Bell, but did not take a degree.

Bell was at that time the leading surgeon of Europe and was a man of marvelous influence over students. He had a charming personality and was a most fascinating speaker. McDowell was deeply impressed by Bell's description of the pitiful plight of victims of abdominal tumors. Three to four years of indescribable suffering and nothing to look forward to but certain death. That he not only was impressed but inspired by Bell's teaching is evidenced by fact that he sent him a written report of his first group of cases.

When he returned to Kentucky he located in his hometown, Danville. His intrinsic worth and natural qualification together with his prestige of a European education all combined to place him in the position of the foremost surgeon west of the Alleghany Mountains. He performed all the operations then in vogue with rare skill and judgment and unparalleled success. He did 22 lithomotomies without a death, one of which was performed upon James K. Polk, of Tennessee, who afterwards became President of the United States. His fame spread over the entire western frontier and patients sought him from far and near. He easily maintained his leadership until the time of his death, which occurred in June, 1830.

He wrote very little for publication. One paper reporting three cases of ovariotomy, was published in 1816 and another reporting two more in 1819. In 1826, he addressed a letter to the physicians of the west in defense of his right of priority in ovariotomy which had been assailed by his own nephew. In 1807, the Medical Society of Philadelphia sent him its diploma of membership and in 1823 the University of Maryland conferred upon him the degree of Doctor of Medicine. This was a curious twist of fate being recognized as a doctor fourteen years after performing the world's first ovariotomy and repeating the procedure twelve times, thereby initiating a new branch of science in a new world. In 1792, he married Sarah, the daughter of Isaac Shelby, the first Governor of Kentucky. Mrs. McDowell had six children, and she survived her distinguished husband ten years. McDowell was public spirited and took active part in matters pertaining to the public good and the social welfare of his community. He was a member of the first Board of Trustees of Centre College and donated the ground upon which the first Episcopal church in Danville was built.

He died at the age of 59 after a two weeks' illness, the nature of which history is not positive. Therefore he was not permitted to behold the fruition of his labor except in his own locality. In fact, no physician ever experiences the gratification of witnessing the full measure of his success, for no new branch of medical knowledge ever matures and bears its fruit in one generation. But a review of the career and sublime achievement of McDowell produces in every physician a feeling of compensatory renumeration, for we know that "the noble visions of the statesman must dissolve in the pitless logic of events;" that the voice of the orator grows fainter and fainter even unto silence as the scroll of time relentlessly unrolls. The sacrifices of the patriot and the valiant deeds of the soldier became immured within the seclusion of library walls, but the achievement of this humble village surgeon, though wrought in the obscurity of a wilderness, has, like the everwidening waves of "the inviolate sea freighted with the precious balm of healing, swelling with the momentum of its noble purpose, gathering more power and renewed vigor at every period of their progress, have laved the shores of every land and every clime even unto the lessening of the toll of human suffering and the lengthening of the span of human life." Quotation from Dr. Yandell.

Mrs. Crawford was also a Virginian who emigrated to Kentucky about the time of McDowell although there is no record that the families were acquainted. They settled in Kentucky near the town of Greensburg which is sixty miles from Danville, a distance over which she had to travel to reach McDowell. Her only mode of transportation was over a lonely path and on horseback. Today there is a magnificent modern highway that bears the name of the "Jane Todd Crawford Trail" and which the Women of the Auxiliary of Kentucky have beautified with shrubs and flowers in honor of Mrs. Crawford.

Her children were all born before the operation and the family soon afterward left Kentucky and settled around Madison, Indiana. Her eldest son was Mayor of Louisville, and lost his life at Pewee Valley, a Louisville suburb in a gas explosion in his home. Her husband also met a tragic death. He stepped into an open cellar door and broke his neck. She afterwards lived with her son, James Crawford, who was a Presbyterian clergyman and in 1842, died at his home at Grayville, Sullivan County, Indiana. Her mortal remains lie there in a neglected country grave yard identified by a modest stone which bears the inscription: "Blessed are the dead who die in the Lord." She lived 33 years after her operation and was therefore 79 years old at the time of her death.

However, a monument has recently been erected by the women of Kentucky at Danville beside McDowell's and carved in imperishable stone is the story of her heroic sacrifice.

The Differential Diagnosis and Surgical Indications When a Splenomegaly Exists*

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One may approach the problem of diseases in which splenic enlargement is a factor from several angles. It is important to be mindful of the fact that there are groups of diseases in which splenic tumor is a response to a general disturbance, and there are others in which the tumor or enlargement is the essential pathological factor.

It is necessary to remind ourselves that only by adequate history taking, physical examination and laboratory data can one interpret the findings in an intelligent way.

It follows then that we must proceed in an analytical manner and literally subject ourselves to a questionnaire when a patient with a splenomegaly presents himself. There are certain facts known about the functions of the spleen and its response to infections:

1. It destroys effete red cells.
2. The fragility of the red cells is increased in certain pathologic conditions associated with splenomegaly.
3. It acts as a scavenger for blood cells and bacteria.
4. It prepares bilirubin from the broken down hemoglobin.
5. It stores iron.
6. It destroys platelets.

There are certain responses on the part of the organism when splenectomy has been done for pathological conditions:

1. A rise in the red cell count.
2. An increased resistance of the red cells to hypotonic salt solution.
3. A lessened tendency to jaundice.
4. Spontaneous hemorrhages are rare after splenectomy for pathologic conditions.
5. There is an increase in the platelet count.
6. There is a return to the normal bleeding time, probably due to the increase in reticulocytes in the circulating blood.
7. The blood clot becomes retractile.
8. There is a proliferation of the endothelial cells in lymph glands and in the liver, and a reddening of the bone marrow.
9. Following splenectomy there is less blood in the portal circulation.

Splenectomy is found associated with infections, tumors, blood dyscrasias, disturbance of the reticule endothelial system and circulatory disturbances such as hypertension in the portal system. Splenic enlargements are noted when:

1. The febrile factor is the outstanding manifestation,
2. Where jaundice is the outstanding sign,
3. In hemorrhagic states,
4. In glandular conditions,
5. In hypertension within the portal system (Banti's disease and cirrhosis of the liver)
6. And in the primary anemias,
7. And when the splenic tumor is the essential pathology.

In order to arrive at a differential diagnosis two things are essential, adequate laboratory data, and a knowledge of the signs and symptoms of the various diseases which may be the causative factor. Therefore it follows that cooperation between the internist, clinical laboratory worker, surgeon and pathologist is essential. In communities where such cooperation is not possible a breadth of vision must characterize the attitude of the practitioner lest he become an enthusiast in one field and an obstructionist in another.

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*Read before the Northeast Mississippi Thirteen-County Medical Society, Booneville, Miss., March 16, 1937.

It is with a view of presenting the subject from the standpoint of diagnostic possibilities that this presentation is to be made.

When a patient with a splenomegaly presents himself the following laboratory data may be necessary for differential diagnostic purposes:

1. Total red count
   a. In the vast majority of the splenomegalies there is a marked anemia.
   b. There are two outstanding diseases in which polycythemia is found, polycythemia vera and tuberculosis of the spleen.
2 Hemoglobin estimation.
   a. In the vast majority of splenomegalies there is a low color index.
   b. In one noticeable example there is a high color index, pernicious anemia.
3. Total leucocyte count.
   a. In some of these cases there is a leucocytosis, in others a leucopenia, and in some the reaction varies with the stage of the disease.
   b. Leucocytosis is found in leukemia, lymphatic and myelogenous; leucopenia in splenic anemia, cirrhosis of the liver.
4. Changes in the shape, size of the red cells, as well as abnormal forms.
   a. In pernicious anemia we have nucleated red cells; in hemolytic jaundice a marked increase in the microcytes and reticulocytes; in myelogenous leukemia myelocytes are present.
5. The platelets may be increased od diminished.
   a. Diminished particularly in purpura hemorrhagica. We also have a none-rectractile clot in purpura hemorrhagica.
6. Fragility.
   a. In hemolytic jaundice there is a marked increase in the fragility
7. Coagulation and bleeding time.
   a. Bleeding time is increased in purpura hemorrhagica, not increased in hemophilia.
8. Icteric index.
   a. Increased in hemolytic jaundice, pernicious anemia and at times in Hodgkin's disease.
9. Urine.
   a. Bile is found in the urine in all types of obstructive jaundice, including (Hodgkin's disease) if glands surrounding the common bile duct produce an obstruction.
10. Stool.
   a. In hemolytic jaundice bile is present in the stool.
   b. Blood may be in the stool in hemolytic jaundice, splenic anemia, pernicious anemia, cirrhosis of the liver, polycythemia and purpura hemorrhagica.
   c. The stools are free of bile in obstructive jaundice.

Failure to arrive at a correct diagnosis leads to disastrous results. In no field of medical work has been more accomplished in recent years than in the one in which we are concerned.

Let me remind you at the outset that surgery is helpful in a spectacular manner in certain groups, notably purpura hemorrhagica, hemolytic jaundice and the Banti syndrome. At the same time, let me remind you that surgery should not be undertaken in infections and where the febrile reaction is the outstanding manifestation. Diseases which belong to this class are malaria, typhoid, Hodgkin's disease, myelogenous leukemia, undulant fever and such tropical diseases as kala-azar and bilharziasis.

Kala-azar, leishmaniasis. This disease is caused by leishmania infection, the leishmania donovani. The transmission of the disease is probably through the bedbug.

The course of the disease is protracted, and is characterized by an irregular fever which sometimes lasts for months. This fever may have a double rise in twenty-four hours. There is a progressive secondary anemia, with leucopenia. The spleen becomes enormously enlarged. The mortality is over 80 per cent.

Egyptian splenomegaly. Bilharziasis. Common occurrence in the poorer agricultural parts of the Nile basin.

Fever of a few weeks' duration usually precedes a gradual splenic enlargement, and may recur at intervals throughout the course of the disease. The blood examination shows in addition to the secondary anemia, a mild leucopenia with relative lymphocytosis and marked eosinophilia, particularly in earlier stages.

Splenectomy is not indicated particularly in earlier stages.

Malta fever, undulant fever. A specific

fever caused as a rule by the micrococcus melitensis, accompanied by undulatory pyrexial relapses, profuse sweats, rheumatic pain, arthritis, and an enlarged spleen. It is endemic in the goat-raising sections of Texas, and by no means infrequent in this section. The portal entry is through the gastrointestinal tract, although Ross and Eyre think it may also be transmitted by mosquitoes.

Clinically the fever has a peculiar irregular curve, consisting of intermittent waves or undulations of pyrexia, of a distinctly remittent character.

The blood serum of a patient with this infection agglutinates the micrococcus melitensis. Cultures may be made from the blood or even from the spleen. Splenectomy is never indicated in the acute stage and very rarely in the chronic form.

When one is confronted by a jaundiced patient he must of necessity make a careful study, particularly if the jaundice is of the painless variety. Here one faces the known facts that painless jaundice in an elderly patient is often associated with carcinoma about the papilla of Vater and carcinoma of the pancreas. We should not overlook two facts in these cases, in jaundice in the aged: First, that common duct stones in 20 per cent of the cases do not give rise to pain, and second, that the jaundice may be hemolytic in origin as well as obstructive.

The hemolytic type of jaundice can, as a rule, be differentiated from the obstructive type by the van den Bergh reaction, and by the finding of bile in the duodenal contents in the non-obstructive or hemolytic variety, and the absence of bile in the duodenal contents in the obstructive type. Bile is found in the urine in the obstructive variety, but not in the hemolytic type. Bile is found in the stool in the hemolytic variety, but in the obstructive variety one finds clay colored stools.

Jaundice is present in several of the diseases in which the spleen is enlarged, notably hemolytic jaundice, pernicious anemia and rarely in splenic anemia (Banti's syndrome). Splenectomy is an effective and indicated procedure in splenic anemia and hemolytic jaundice. The clinical picture is as a rule clear cut in each of these diseases.

Hemolytic jaundice is characterized by splenomegaly, the presence of coloring matter in the stool and the absence of bile pigment in the urine. Examination of the blood reveals the diagnostic characteristics of hemolytic jaundice. There is an increased fragility of the red cells and a marked secondary anemia. Spherical microcytes are found in large numbers in the blood. Some authorities believe that these microcytes are responsible for the increased fragility.

In pernicious anemia we find achylia, an enlarged spleen, hematenesis and melena, a high color index, marked diminution in the red cell count, and nucleated red cells. Splenectomy is no longer thought of as a therapeutic measure in pernicious anemia.

Since jaundice may be such a confusing factor, so too may be the hemorrhagic states be confusing when they are associated with splenomegaly.

Banti's disease, polycythemia vera, pernicious anemia and true purpura hemorrhagica, and hemophilia all are associated with splenomegaly and all may be associated with hemorrhagic states.

Banti's disease and purpura hemorrhagica are essentially surgical, the others are not. When attempting to evaluate the source of hematemesis or melena one must quickly obtain all possible data. The sources of hematemesis are as a rule esophageal varices or gastric lesions.

We can not at this time undertake to discuss this phase in its entirety, but must limit the discussion to the question of how do the diseases with splenomegaly happen to be associated with hematemesis, melena, or other hemorrhagic states.

Splenic anemia is characterized by splenomegaly, weakness, progressive secondary anemia, low color index and leukopenia. The red cells retain their normal shape. Nucleated red cells are rarely seen and the fragility of the red corpuscles is not increased. The coagulation and bleeding time are normal and the platelet count is not disturbed. Jaundice is rare. At times there are hemorrhages which may be severe and occasionally prove fatal. The most severe hemorrhages are uterine, however, purpura, epitaxis, hematemesis, melena, and hematuria are seen. In the later stage of the disease the liver is enlarged and there is an associated ascites.

One might confidently expect good results from splenomegaly in early cases of Banti's syndrome and may even obtain excellent results where cirrhosis and ascites are already present since the removal of the disease spleen diminishes quantity of circulating blood through the already engorged diseased liver.

Recently Rousselot, reporting for the Presbyterian Hospital Group, stated: "That in 31 cases operated upon, 2 patients presented themselves because of a sudden hematemesis." It is his impression from a study of the cases, that a portal hypertension probably is present in all cases of the Banti syndrome.

Under the strict definition of Banti's disease it is generally asserted that there is no definite etiology.

Hypertension in the splenic and portal systems, obstruction in the portal vein and primary cirrhosis of the liver are associated with the Banti syndrome.

McNee, quoted by Larrabee, believes that Banti's disease is merely an unusual type of alcoholic cirrhosis.

Larrabee today *would have us discard the term, Banti's disease, and speak of chronic congestive splenomegaly. He further believes that "a considerable number of cases of splenic anemia dependent upon various lesions obstructing the portal blood flow may be relieved by splenectomy."*

[1]"Summary. On the basis of a study of 47 cases the view is expressed that in the majority of patients presenting the clinical picture of Banti's disease (splenomegaly with fibrosis, microcytic anemia with leukopenia and a late stage with hemorrhages and ascites) the condition is dependent upon various intra-abdominal lesions obstructing the venous outflow of the spleen. By far the most common of these is liver cirrhosis of various types. As Banti has limited the definition of the disease which bears his name in such a manner as to exclude these cases it is thought best to segregate them under a distinctive name. However, splenectomy is indicated just as in Banti's disease, regardless of the nature of the underlying lesions."

The same opinion was expressed in my paper on the reticulo-endothelial system. "Consideration of the results of splenectomy, in those cases of the Banti syndrome associated with ascites, has directed attention to the possible value of splenectomy in cirrhosis of the liver."

This is but another instance of the increasing number of border line diseases and the importance of cooperation between certain groups within the profession.

Purpura Hemorrhagica: One of the most spectacular developments in modern medicine has been the recognition of the fact that purpura hemorrhagica is curable by splenectomy. This disease is characterized by varying degrees of splenic enlargement, hemorrhage from the mucus membrane and under the skin, marked anemia, prolonged bleeding time, normal coagulation, a non-retractile clot and a diminution in the platelet count.

There is nothing more spectacular than to see a patient who has had large subcutaneous hemorrhages cease to have these hemorrhages following splenectomy. These patients rarely have recurrences of hemorrhages after splenectomy. It should not be overlooked, however, that some of the other hemorrhagic diseases, such as purpura simplex and hemophilia do not respond in a like manner.

The laboratory and the history provide the differential information. There is the familial history in hemophilia and in purpura there is no evidence of hereditary predisposition. Platelets are found in normal numbers in hemophilia.

It should be remembered that sera and calcium salt will not be effective in controlling hemorrhage in cases of purpura. I believe that transfusion and splenectomy are specific in this disease.

A disease in which splenomegaly is associated with a hemorrhagic state must be mentioned and eliminated even though it is rarely seen—polycythemia vera or Vaquez-Osler's disease.

Polycythemia is a slowly progressive chronic disease associated with an extremely large spleen, marked weakness, a peculiar flush of the skin (apparently a much deeper red than normal) which is especially noticeable about the face and hands. In the later stage there are hemorrhages which may be intestinal, cerebral and even in the extremities. This syndrome is extremely important because of the difficulties encountered in arriving at a correct diagnosis. One of the conditions with which it is often confused, tuberculosis of

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1. Larrabee, American Journal of Medical Science, vol. 188, 1934, page 745.

the spleen, is benefited by splenectomy. In polycythemia vera because of uncompensated activities on the part of the hemotopoetic system, splenectomy is not indicated.

From the foregoing it follows that in order to arrive at a proper diagnosis attention must be given to splenic enlargement when gastric or intestinal hemorrhages are the evident emergency factor, and it should be pointed out that anemias should not be treated without an effort to determine the tiologic factors.

In the group of diseases in which lymph gland enlargement are found associated with splenomegaly there are two of special importance, Hodgkin's disease and lymphatic leukemia. In neither of these should splenectomy be considered.

Personal experience with a group of cases in which splenomegaly was a prominent manifestation has impressed me with the fact that there are several outstanding points which should be of great practical value:

1. Splenomegalies associated with acute febrile reaction are rarely benefited by splenectomy.

2. Splenomegalies associated with glandular enlargement (Hodgkin's disease, lymphatic leukemia, tuberculosis and lues) are not to be considered as surgical cases.

3. Gastric hemorrhages are often allowed to cloud the issue and an unwarranted conclusion is arrived at that the disease is primarily in the stomach when in reality it may be secondary either to the engorgement of the portal circulation in the case of polycythemia or late Banti's disease and pernicious anemia.

4. Secondary anemias are often treated without reference to the etiologic factors. If these cases are thoroughly investigated probably more early splenic anemias would be brought to light and earlier surgical intervention would offer the patient more hope for an eventual recovery.

5. Hemorrhagic purpura is curable in a spectacular way by splenectomy.

6. Serums and calcium salts are of no value in the treatment of true purpura.

7. Splenectomy is not to be considered primarily as the treatment for splenomegalies.

8. Splenomegaly due to hemolytic jaundice, the Banti syndrome and purpura hemorrhagica, calls for splenectomy.

9. All available laboratory data should be utilized for differential diagnostic purposes.

1522 Aline Street.

THE MISSISSIPPI DOCTOR

The Journal with a vision, the delivery of modern medicine to the masses at less cost to the individual and more profit to the practitioner. The champion the small hospital, the hub around which this service must be built.

W. H. ANDERSON, M.D., Editor and Mgr.
MILDRED P. ANDERSON, Assistant Editor

OFFICIAL ORGAN OF
Mississippi State Medical Association
Mid-South Postgraduate Medical Assembly

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Our state medical meeting is at hand. It meets in Meridian May 11, 12, 13. Meridian has a fine medical atmosphere. The doctors and the city are making elaborate preparations for the members of the association and their guests. The scientific program is the strongest that has been offered in a number of years. Organized medicine is imperative in the age in which we live. We go forward by organization and by cooperation. Every doctor who can possibly do so should attend his state meeting. Every doctor in the state can give something to the association and he can receive something back. Every doctor practicing medicine knows some one thing that no one else knows. You can give one idea and maybe receive in return five hundred. Some of our fine practitioners somehow have got out of the habit of going to the meetings. Somehow they seem to think that their ideas are too old, that their style of practice is out of date, that the young men know it all. The young men comin gout of school now are mighty well trained. But the men who have been in practice from twenty five to forty years are not too old to do good work. It is poor business to think of putting the "old practitioner" on the shelf. He knows too much. He has too many fine qualities of mind, heart and soul. If a factory changes machinery it does not change all of its help. It usually takes what it has and gives them more training. Mississippi has begun a wonderful work in our opinion, that of bringing post-graduate medical education out to these men who are busy in the harness. Post-graduate work in every phase of medical education will be brought to every nook and corner of our state in the near future in our opinion. This serves a double purpose. It brings new ideas and new methods from the outstanding authorities and it in turn lets them see the conditions under which the vast majority of medical practice must be applied. The message will be carried back and the medical schools will make their teachings more practical. At our state medical association, and on Monday the day before, you have in store a medical feast if you will but partake of it. We want to urge the "forgotten man" to turn over a new leaf and attend your state meeting. We are talking of many of the finest practitioners we have, they have just been so busy they forgot to go, and they have been forgotten because they did not go. They are not too old. So man is old as long as he wants to learn, as long as he loves to serve. The man who practices medicine is stimulated daily by new medical conditions and by new problems. Let us all attend the state meeting. Let us set our sails to go forward in Mississippi medicine.

Doctor Harvey F. Garrison, Sr., of Jackson, has made a fine president of the state association. He has been very active. Where duty called he responded with his presence. His personal touch has been very valuable. He has delivered many able addresses in the field of pediatrics. No subject in which the profession was interested has escaped him. He has inspired better scientific programs throughout the local societies of the state. He has made quick and very thorough investigation of every medical problem coming before us. And on these questions his judgment has been safe and sound. He took an active part in his own society in securing the post-graduate course given by the Vanderbilt Faculty under the leadership of Dr. W. S. Leathers. This marked a new day for Mississippi medicine. The post-graduate course in pediatrics which he has arranged the day before the state meeting is outstanding. The entire state program is indicative of his vision and his practical application. He has the power to conceive and the willingness to work with other men. He has created a medical awakening in our state association. Dr. Garrison's appeal has reached every member of rison's appeal has reached every member of the profession, men have been interested every mmber of the association who had not realized it before. He has utilized the fine and able services of president-elect W. L. Little, who has a vision and ideals in the fundamentals of the profession. Their cooperative work has been inspirational. We believe that Dr. Garrison's vision for the state association, his practical, persistent and unselmish efforts throughout the year, will be manifested in the meeting at Meridian and in the years to follow. We congratulate him and we appreciate the service he has rendered.

In addition to many of our own physicians in Mississippi, we will have the following out-of-state, distinguished teachers and authorities on medicine who will participate in both the State Medical Association's and the State Pediatric Society's programs, says President Garrison.

Joseph Brenneman, Chicago; Paul Holinger, Chicago; Walter C. Alvarez, Mayo Clinic; Seale Harris, Birmingham; Seale Harris, Jr., Birmingham; Murdock Equen, Atlanta; Willis Campbell, Memphis; J. B. Costen, St. Louis; D. C. Elkins, Atlanta; R. A. Voderlehr, Washington; W. J. Sharp, New Orleans; W. Frank Walker, New York City; H. W. Kostmayer, New Orleans; Maxwell E. Lapham, New Orleans; Virgil Payne, Pine Bluff; Edward Clay Mitchell, Memphis; Robert A. Strong, New Orleans; Lawrence R. DeBuys, New Orleans.

Not before in any year if ever have we had such an array of big men to attend our Mississippi State Medical Association. You can not afford to miss your state meeting this year. The program is too fine. The specialists and the authorities will cover the field of medicine and surgery. Our fine local talent will give our distinguished and appreciated guests something to think about from the standpoint of the man out on the medical firing lines. The call and the opportunity is to one and to all.

And now it seems that some of the modern hospitals in California are adding "expectant daddy" rooms. This seems very kind and considerate on first thought. But it seems that anxious dads are to put in their time sudying baby technique; how to bathe the baby, how to fix the bottles, and a good drilling in "didyology." This move was no doubt started by kind and sympathetic mothers and pushed along by the socially ambitious who looked further into the future. Both forces working together will insure rapid accomplishment. The beneficiary like a sheep before his shearers is submitting dumbly no doubt. But even if he should see the method for woe-man equality it gives a decided air of importance and he will like it.

Heredity plays quite a big part in health and in disese, in physical staina and mental power. Themedical professor could furnish information now that might result in a much stronger race within even one or two centuries.

This issue of *The Mississippi Doctor* rounds out our fourteen volumes. We have gone from twelve to one hundred pages. It is only in the very beginning of what we hope to make it. We are deeply grateful to every one who has helped us to make some progress.

Go to this meeting of the Miss. state and hear the outstanding specialist and hear the practical practationer. Mix and stir the ingredients and you will have a most helpful product to utilize in your daily work.

We deeply appreciate the renewal of the ads of the Huston Hospital at Huston and the Baptist at Jackson. This journal has tried to be mighty nice to the hospitals. These are showing fine appreciation.

Every doctor who can should attend the hospital association at Meridian on the day before the merical association. Important problems will likely come before this body.

The doctor who keeps mentally and physically fit will not grow old in the practice of medicine. Spend four days in Meridian May 10, 11, 12 and 13 and renew your professional youth.

The post-graduate work our doctors are receiving at Tulane is a big asset to our profession and will mean much better service to the people.

Other things being equal please buy from the companies who advertise with us. It will not hurt you. It will help us a lot.

Dr. Albee is one of the outstanding orthopedic surgeons of this country. You will be glad to read his paper in this issue.

The doctors will greatly appreciate the motion picture furnished us by Dr. Lee, the Bible authority of obstetrics in this country.

The hair-splitting resolutionist and constitutionalist is too often the greatest offender when it is to his advantage.

There is no one thing common or of little importance in the practice of medicine.

Don't fail to read the papers of our outstanding professors of sugery, Drs. Cohn and Hendon.

We thank the hotel association of Meridian for a full page ad for this special Mississippi edition.

The distribution of charity funds on a per capita basis is just a bit complicated, but the kinks will iron out. It is a great step forward.

President Garrison has put heart, soul and service into the state meeting this year.

The doctors of Mississippi could use a few hundred trained nurses in their offices to the good of their professional edification, to the advantage of their financial incomes, and to the pleasure and profit of the people.

The forty-sixth Annual Session of the Association was held in Vicksburg April 8-10 inclusive 1913. Reviewing this meeting in my mind I find this was a very important and interesting session. Dr. S. W. Glass was the presiding official. He had been a constant attendant and hard worker previous to this meeting, but his interests in other activities seem to have taken precedence over associational matters since that time. He was of genial disposition and had many friends as evidenced by the fact that he was made president without opposition. The program was full and strong, many out of state men taking part. Among these were men from New Orleans, Memphis and other parts. C. Jeff Miller, Isadore Dyer, C. C. Bass, Homer DuPuy and others from New Orleans; F. D. Smythe, Frank Jones, J. B. McElroy, Wm. Krause, O. B. McCown and others from Memphis. Of our own men we had W. S. Leathers, W. A. Dearman, J. M. Buchanan, H. A. Shands, Henry Boswell, F. J. Underwood and many others. Even this writer, presented a short paper, with report of a single case, of psychoneurosis, that elicited a very lengthy and general discussion from many of the best men in our territory. But in my thinking the two outstanding features of the meeting were the oration delivered by Dr. C. D. Mitchell and a reminiscent and historic sketch of the Association covering forty years of membership by Dr. C. Kendrick. These speeches were characteristic of the men who made them. Two more brilliant men have never appeared on the same program during the many years that I have been a member and attendant on the meetings of the association. I wish that these speeches might be preserved in our archives and that they might be read and re-read by our members as the days come and go. Less than a quarter of a century has passed since this meeting; yet but few of the men taking part on that program are alive today. Life is short and time is fleeting. It will not seem long until only a place in memory will hold the names of all who were there.

The program of the approaching meeting at Meridian reached me this morning. It is a most interesting program and I feel quite sure that it will meet the expectations of the most critical member of the association. Among other pleasing features is the appearance of Dr. Haggard, who will deliver the Ewing Fox Howard oration. Dr. Garrison is to be congratulated in having secured this most erudite and brilliant man for this occasion. In my thinking Dr. Haggard is one of the most pleasing speakers in the nation and he has selected a most important subject for discussion. I note that his title is in the form of a query. This is as it should be, since so little that is definite has yet been said or done in this line. Yet I feel that he will answer his own question with the last word up until now. How earnestly I wish that a definite and positive conclusion might be reached as to the nature and etiology of this dreadful condition.

Then, I feel, that the question raised by Dr. Haggard would soon be answered positively and the human race would be protected and our profession would be freed from the stigma of ignorance and indifference under which we have rested for all too long a time. When this great problem shall have been truly and definitely solved this writer shall be content to draw the drapery of the evening of life around him and fall asleep. Dr. Garrison is to be congratulated, further, on the effort he has put forth during his insumbency of the office of president. He has given much time and thought to the work that falls to any man who assumes this responsibility. But few men who have preceded him have shown so much fitness for the place and work.

It is very gratifying to me to know that Dr. Little, who succeeds him is most fitted to take the work and honor that Dr. Garrison will surrender to him on the twelfth of May. I have known Dr. Little long and have observed him closely. And it is my belief that no member of the association is better fitted or more deserving than he.

How eagerly I look forward to the meeting and how happy I shall be to meet so many friends there. And I feel that a great feast of all good things is in store for all who shall attend. So let us all look forward and upward and press onward in the great work that is ours.

G. S. B.

DR. FRANK K. BOLAND
ATLANTA, GEORGIA

President, Southern Medical Association 1936-1937

We are all delighted that the Southern Medical Association is to hold its next session in New Orleans. It is a most interesting city. It has a medical atmosphere and a fine medical background. Preparations are going forward in fine style for this meeting under the leadership and rection of Dr. Boland and Mr. Loranz. Make your preparations now to attend this meeting. Ed.

FRANK KELLS BOLAND
President of the Southern Medical Association

Medical history and literature will refer to the newly elected President of the Southern Medical Association as Dr. Frank Kells Boland, of Atlanta. His father was Dr. Kells Hewitt Boland, who was born in Canada and his mother, Louise Bright Boland, a native of Ohio.

He was born in Indianapolis on May 3, 1875, and moved to Atlanta at the age of four months, where his father practiced medicine for many years.

Frank Boland attended the Crew Street School in Atlanta, the Boys' High School, and the University of Georgia, from which he was graduated with the degree of Bachelor of Arts in 1897. To call him Frank is natural and easy, and one realizes in him the greatest gentleman of the generation. He was president of his class and made many a young heart warm during his college days with the magic rhythm of the violin which he loved and played well but gave up when he began to study medicine. After completing his course at the University, he entered the Atlanta College of Physicians and Surgeons, now Emory University School of Medicine, and was graduated in 1900. He was a classmate of Dr. Stewart R. Roberts, of Atlanta, former President of the Southern Medical Association. After graduating he did postgraduate work at Johns Hopkins under Osler and the distinguished group of that time. He was intern and later resident in surgery at St. Joseph's Hospital until 1903, when he returned to Atlanta to practice.

In 1905 he married Molly Leila Horsley of West Point, Georgia, daughter of a physician and she has been a constant inspiration and help to him through the years. They have two sons now practicing medicine, who, like their father, were famous football players at the University of Georgia, and who followed their father's footsteps into Phi Beta Kappa and Chi Phi. In 1926 the University of Georgia bestowed upon Dr. Boland the degree of Doctor of Science.

The new President has missed few meetings of the Southern Medical Association in twenty years. He has been president of his county and state medical societies, of the Chattahoochee Valley Medical Association, the Southeastern Surgical Congress, and the Southern Surgical Association. He served the Southern Medical Association as General Chairman for the Atlanta meeting in 1926, Chairman of the Council. He is a fellow of the American College of Surgeons, the American Surgical Association and the American Association for Thoracic Surgery, and has been Vice-Chairman of the Section on General Surgery of the American Medical Association. He has made many valuable contributions to the Southern Medical Association Journal and to other scientific publications. He has taught anatomy and surgery in Emory University School of Medicine since he entered the practice of medicine in 1903; from 1921 to 1930 was Professor of Surgery; and since 1930 has been Professor of Clinical Surgery.

During the War he was Lieutenant-Colonel in the Medical Corps and went overseas with the American Expeditionary Force. He was Chief of the surgical service at Base Hospital 43, in Blois, France, the Emory University Unit. At present he holds a commission as Colonel in the Medical Reserve Corps, U. S. Army.

Dr. Boland is President of the Crawford W. Long Memorial Association, and was largely instrumental in placing Dr. Long's statue in Statuary Hall in the National Capitol as one of Georgia's most illustrious sons. —SOUTHERN MEDICAL JOURNAL.

TO THE MEMBERS OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION

It is with great pleasure that I take this opportunity of addressing the medical profession of the beautiful, historic state of Mississippi. The invitation to appear before your meeting at Meridian was highly appreciated and I regret that I cannot accept, due to the fact that I must attend the meeting of the Medical Association of Georgia, in Macon, which occurs on exactly the same days as your meeting.

Mississippi has always been among the leaders in its percentage of doctors who are members of the Southern Medical Association. This year, with the meeting occuring in nearby New Orleans, your attendance record should be at the very top. With the splendid meetings which we have had during the past few years it seems superfluous to tell you what a Southern Medical Association convention is like. For an all-round good meeting, with every department of medicine emphasized, and with fine fellowship abounding, you can find no more pleasant or profitable gathering to attend than this one.

The first day of our four-day meeting, November 30-December 1, 2, 3, will be in charge of the New Orleans doctors, and this, of course, guarantees sessions of the highest type. We all know there is no more wide-awake medical center in the United States than the Crescent City. Half of the second day will be given over to two General Clinical Sessions running concurrently, addressed by well-known physicians and surgeons from different parts of the country. The last half of this day and the two last days will be devoted to sectional meetings. The public meeting the first night will feature four of the leading medical speakers of the South.

In addition to these regular sessions of the Southern Medical Association several important other organizations will hold their annual meetings during the same days. Among these are the Southern branch of the American Public Health Association, National Malaria Committee, American Society of Tropical Medicine, and others.

As you know, our exhibits have grown to be second to none in extent and importance.

The Southern Medical Association is strictly a scientific body. Economic medical matters and other important things pertaining to medical organization are well cared for in county and state organizations and by the American Medical Association. The Southern Medical Association, therefore, is left free to devote all of its time to scientific papers, clinics and demonstrations, so that the visiting doctors are filled up with instruction of material benefit to them in their daily practice. Also, the finest cordiality and Southern hospitality are always in evidence, proving that "it is true what they say about Dixie."

The doctors of Mississippi are urged to come to New Orleans for the whole four-day session. You cannot belong to a non-profitable association and you cannot receive a monthly medical journal sparkling with more important, timely reading than the *Southern Medical Journal.*

Yours fraternally,
FRANK K. BOLAND, President
Southern Medical Ass'n.

Letters to the Editor

Dear Dr. Anderson:

Three libraries have recently been donated to the School of Medicine of the University and I thought it possible that you might like to carry some notice of in in *The Mississippi Doctor.*

Dr. J. M. Wright, of Hernando, made the first gift of 50 volumes. Later Mrs. A. J. Weissinger, wife of the late Dr. A. J. Weissinger, of Hernando, gave us 217 books and 75 volumes of journals from her husband's library; and Mrs. J. E. Givhan gave us 72 books from Dr. Givhan's collection. Mrs. Givhan's home is near Pontotoc.

Also you may be interested to know that our book collection has been increased from 400 to 1000 volumes in the past year, and we now have 50 sets of bound journals. Some 300 volumes of bound journals have been added recently. The Medical Library has been moved into newly decorated quarters. It now has a large reading room, a bound journal room, and a magazine room for current copies of the journals.

We apperciate greatly your cooperation in helping us complete our files of *The Mississippi Doctor.*

With best wishes, I am,

Sincerely yours,
(Miss) Ross Jeffree,
Librarian,
Medical Library.

This is fine work for our medical school. Our two year course is one of the very best to be found any where. It enables many of our fine young men to study medicine where they might not be able to do so if not for the reasonable rate it offers. The premedical course Ole Miss offers is mighty good. Ed.

Dr. W. H. Anderson:

We have just received the March issue of your publication and we wish to thank you for it and also for placing our library on your mailing list.

We assure you that your courtesy is very much appreciated.

Very truly yours,
Mary O. Boyuton,
Univ. of Vermont Medical Librarian.

Dr. W. H. Anderson:

Through usage, our copy of *The Mississippi Doctor* for April, Vol. 14, No. 11, has been torn. The tear extends down into the text, and a part of the text of two pages is completely gone, I am, therefore wondering if it would be possible to obtain another copy of this issue. We greatly appreciate being on your mailing list and if a second copy o this journal is out of the question, I will certainly understand. However, if you are able to replace this issue, we will be most grateful.

I regret very much that this has happened, but the journal is read and enjoyed here, and I hope you will be able to help us out.

Thank you very much.

Sincerely yours,
Mrs. Eileen R. Cunningham,
Vanderbilt Librarian.

DR. GREEN BERRY GILLESPIE

Dr. Green Berry Gillespie, the oldest living practitioner of Tennessee—a man who refused opportunities to become a famous specialist in the city for the life of a country doctor—died of a heart attack recently at his home in Covington, Tenn. He was 92.

He fought through the Civil War with the Confederate forces, endured reconstruction days and the plague of yellow fever, had gone to his office and practiced the day he died.

Mentally alert and remarkably active physically, Dr. Gillespie had missed a few days of practicing of late years. At the time of his death he was county health officer of Tippah County.

He was born in Northern Georgia, entered the Civil War from Georgia, and though he fought in many of the bloodiest battles of the war, received no wounds.

Afterward he returned to Georgia, where he taught school a few years. From there he moved to Athens, Tenn., and then attended the University of Tennessee. He was a member of the first graduating class of the Vanderbilt Medical School in 1875.

Returning to his old home in Georgia, he practiced there for a year, then went to Western Kentucky, near Hickman, to practice a year. From there he went to Covington.

Interested in specializing in women's diseases, he took post-graduate work in London, Vienna and Edinburgh for a year and received high praise for his work there in 1894. After his return, he also took post-graduate work at Tulane and in New York.

He soon found, however, that he preferred the life of the general practitioner—he felt that the service to humanity would be greater in that field. To the last he studied diligently, keeping abreast of all modern knowledge in medicine.

Dr. Gillespie was a past president of the Tri-State Medical Society and was a member of various medical associations at his death.

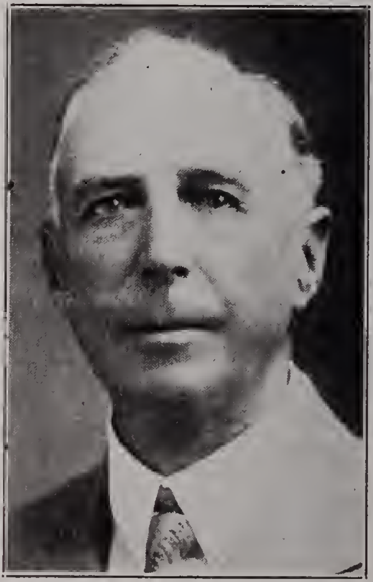
He also had been president of the Farmers Union Bank and the Union Savings Bank of Covington, and had been a member of the school board there several years.

He had been a steward in First Methodist Church of Covington for 40 years.

He leaves his wife, Mrs. Catherine Gillespie; a son, Paul, Gillespie, Chicago, Ill.; a granddaughter, Mrs. William Greenhill, Greenwood, Miss.—*Press-Scimitar*

It is very inspiring to read the above account of this patriarch of the medical profession. He must have had a great vision of service. It was realized. He prepared himself well and then he served the people who need him and appreciated his work no doubt. He made himself one of them. He entered into their pleasures, joys, sympathies. He took part fully with them as a citizen. Citizenship should not detract from a man's professional efficiency. To practice medicine successfully, and especially preventive medicine, the patient needs to be known in all of his relations to live. In this new era of preventive medicine, this type of man will still be most valuable. Ed.

THOMAS J. BROWN



This is a likeness of Thomas James Brown, of Grenada. He is a man of strong character and definite opinions. He recently celebrated his 75th birthday. But he is not old. He is still actively in the harness. He is going forward eager to learn, able and willing to serve after fifty-one years of active practice. He is a county health officer and does general practice. According to paper reports the people believe in Doctor Brown. He was given a wonderful celebration on his recent birthday. The lines on his face and imprint of determination indicate that he has overcome difficulties. He received a high school education in his home county. His father died when he was only seventeen. He was the oldest of four brothers. When his father died the six-hundred-acre farm and aid to the younger brothers was his lot. He put himself doggedly to this task for four years before he began his medical course in the Memphis Hospital Medical College. He was graduated on February 26, 1886, was licensed to practice in April following. In December of the same year he did his greatest day's work when he married Miss Jimmie Bibby, daughter of Dr. T. Q. Bibby, of Pontotoc. She has been an inspiration to him and a devoted helper all along the way. His mother was spared until recent years. She was a woman of vision, was full of energy and determination. Dr. and Mrs. Brown have three fine daughters. It is a devoted and a happy family. We congratulate Dr. Brown. We wish for him and the family many more useful and happy years together.

TO THE EXECUTIVE IN CHARGE OF THE HOSPITAL ADDRESSED

The National Hospital Day Committee, under the Chairmanship of Mr. Albert G. Hahn, is earnestly desirous that National Hospital Day, May 12, be universally observed throughout the entire length and breadth of the American continent, and the Association of Mississippi Hospitals is eager to achieve a one hundred percent record for our state in the observance of this significant event.

Every hospital, no matter what type of organization or ownership it functions under, is in effect a public-service institution. Since the hospital, therefore, maintains the position and carries the obligations of an important public utility, the community is interested in the hospital and wants to know the facts concerning its services.

The observance of National Hospital Day has for its goal the dissemination of knowledge pertaining to the daily service of every hospital. This education, when coupled with entertainment, has a lasting influence that will tend to inspire confidence, respect and appreciation for our institutions.

The undersigned as a National Hospital Day Committee, for the State of Mississippi desire to impress upon the management of every hospital in this state the importance of making use of the opportunity afforded through this nationally-recognized event for the creation of good-will and the ultimate accumulation of valuable support of the most substantial kind. Many channels are open to you by which you can reach the public with your message concerning National Hospital Day. The enclosed folder issued by the National Hospital Day Committee points the way. You are especially urged to contact your local newspapers and secure mention, both in the editorial and news columns of the significance of National Hospital Day, of the open house conducted by your hospital and any other feature you may arrange. The service and civic clubs in your community, such as Rotary, Kiwanis, Lions, Optimists and any other similar clubs represented there, will be glad to cooperate. Churches in your community should likewise be contacted, for you may be sure that your local pastors will be glad to make reference to the event and to transmit to their audiences the invitation to visit your hospital.

This committee will be glad to cooperate with you in every possible way and invites you to write the chairman, the secretary, or any member, regarding any problem you may wish their advice upon in connection with National Hospital Day. The committee would also like to receive from you a report concerning your program, preferably in advance, but in any event a report of the observance of the day in your community and your estimate of its effectiveness.

Signed: F. B. Long, Chairman.
Starkville
F. S. Hill, Grenada
F. P. Ivy, West Point
M. H. McRae, Corinth
V. B. Martin, Picayune
Sidney A. Head, Columbus
G. M. Street, Vicksburg
W. S. F. Tatum, Hattiesburg.

PROGRAM
MISSISSIPPI STATE PEDIATRIC SOCIETY
BLUE ROOM—LAMAR HOTEL
MERIDIAN, MISS.
Monday Afternoon and Night
MAY 10, 1937

This is one of the most outstanding programs on Pediatrics that has ever been seen or heard at any time or place. The distinguished pediatricians who are appearing on this program are all teachers, as well as practitioners, of Pediatrics. This is going to be a real treat to the Medical Profession of Mississippi.

The speakers, as well as the subjects on this program, were selected primarily in the interest of the general practitioners of this State. The subjects for discussion are just such as we see in every day practice.

Every practitioner of medicine, regardless of the type of practice in which he may be engaged, is cordially invited to attend the afternoon and night programs AS WELL AS THE BANQUET. The afternoon session begins at 1:30 p. m. The night session and banquet begins at 6:30 p. m.

Monday Afternoon, May 10, 1937
1:30 p. m.

1. "BLOOD TRANSFUSIONS, INDICATIONS, CONTRA-INDICATIONS, RESULTS, REACTIONS, AND COMPLICATIONS"

Edward Clay Mitchell
Professor of Pediatrics, Medical Department,
University of Tennessee, Memphis, Tenn.

2. "LARYNGO-TRACHEO-BRONCHITIS"

Joseph Brennemann
Author and Teacher of Pediatrics,
Chief Pediatrician, Children's Memorial Hospital,
Chicago, Illinois

3. "ATELECTASIS IN CHILDREN"

Paul Holinger
Bronchoscopist, Children's Memorial Hospital
Chicago, Illinois

4. "NUTRITIONAL ANEMIA IN INFANCY"

Robert A. Strong
Professor of Pediatrics, Medical Department,
Tulane University,
New Orleans, Louisiana

FELLOWSHIP AND REFRESHMENT
HOUR—5:30 to 6:30 p. m.

BANQUET PROMPTLY AT 6:30 p. m.

Felix J. Underwood
Toastmaster

1. "THE ATTITUDE OF THE STATE HEALTH DEPARTMENT TOWARD CHILD HEALTH"

Felix J. Underwood
State Health Officer, Jackson, Miss.

2. "THE DIARRHEAS IN CHILDREN"

Lawrence R. DeBuys
President American Academy of Pediatrics
New Orleans, Louisiana

3. "ACUTE UPPER RESPIRATORY TRACT INFECTIONS IN CHILDREN"

Joseph Brennemann
Author and Teacher of Pediatrics,
Chief Pediatrician,
Children's Memorial Hospital
Chicago, Illinois

BANQUET TICKETS $1.00

All who expect to attend this meeting and banquet are earnestly requested to write:

Dr. Guy C. Jarratt
Vicksburg, Miss.

immediately upon receipt of this program, requesting reservations for the banquet, since it is absolutely necessary that we know the number who will attend in order that we may notify the hotel for banquet reservations.

TO THE MEMBERS OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION

My dear Doctors:

I hope that I will have the pleasure of seeing everyone of you at the meeting of the Mississippi State Medical Association, and also at the meeting of the Mississippi State Pediatric Society, on Monday afternoon and night, May 10.

I have never seen a better program of the Mississippi State Medical Association. The list of essayists reveals the names of some of the most outstanding physicians that this country has ever known. This meeting is going to be a real treat to the medical profession of this State. It is essentially a postgraduate course. If you miss hearing any one of these essayists, you are going to miss something that would really be worth hearing.

The Program Committee of the Mississippi State Medical Association, has done a most wonderful work. They have cooperated with me in the preparation of this program, to the fullest extent, and I publicly acknowledge herewith, my profound appreciation for their splendid cooperation, and at the same time, congratulate them for one of the most outstanding programs that has ever been arranged for the Mississippi State Medical Association.

The Mississippi State Pediatric Society, of which I am also president, has arranged its program primarily in the interest of the general practitioner. The subjects listed on this program, are such that every practitioner of medicine should hear. This is *really* a postgraduate course in pediatrics for you. Let me urge you to arrive in Meridian at noon, Monday, May 10th, and remain through the afternoon and night programs of the Mississippi State Pediatric Society! The banquet will be held in the Blue Room of the Lamar Hotel, Meridian, Monday night, May 10, at 6:30. You are cordially invited to attend the meetings and participate in the banquet!

To those of you who will be detained and will not be able to get to these meetings I would like to extend to you my heartful of gratitude for your loyal cooperation, and for the great honor that you have bestowed upon me throughout the past year. I assure you that I consider it the greatest honor that could have been conferred upon me, by anyone, at any time or place. I want you to know that I appreciate it.

I will consider it an honor to have the pleasure of your presence at these meetings. All of you who expect to attend the banquet, are urged to write me a card, in order that I may make the necessary banquet reservations.

With anticipated pleasure of seeing you at these meetings, and with a heartful of gratitude and love for you, I am,

Sincerely and fraternally yours,
HARVEY F. GARRISON,
President, Miss. State Medical Ass'n.

Sitting in front is Dr. H. A. Gant, of Columbia, Tenn., as he was visited recently by Drs. Bryan, of Amory, Anderson, of Booneville, and W. A. Evans, of Aberdeen, (from left to right). Dr. H. A. Gant spent many years in Mississippi. He distinguished himself in public health work during the days of the yellow fever epidemics. Speaking in terms of Columbus's expedition, Dr. Gant was on the front deck with the small group who saw land first. He was one of the key men who gathered the evidence that convicted the mosquito as the yellow fever carrier. He rendered Mississippi a fine service. The papers he has published in *The Mississippi Doctor* are original, romantic, and of great historical value. Dr. Gant is a delightful man to know. His memory is fine, his interest is keen. He has the marks of a scholar and a gentleman of the old school of Southern chivalry. We would be more than delighted to have him attend our state meeting in May. His papers should be in book form and every doctor in this state should have one on his desk as a matter of historical interest and as an evidence of appreciation of Dr. Gant's fine service.

Dr. Bryan, of Amory, is our medical sage of Monticello. He served ably on our state board of health, was outstanding as president of the state association and is one of the best informed men in this state on general medical subjects.

Dr. Evans is known around the world for writing on "How to Keep Well," published so long in the *Chicago Tribune* and *The Commercial Appeal.* The service he rendered can never be estimated. Mississippi is very proud of him and his work and is delighted to have him come back home and spend much of his time with us.

BOOK REVIEWS

Medical Treatment of Cataract

By A. Edward Davis, M.D.

This book contains much valuable information in regard to cataract, its prevention and treatment. The author had the cooperation of several eminent physicians in giving the medical world a most valuable volume on cataract. It is edited in such a very interesting and easily understandable form that the general practitioner and student as well as the specialist will find it most useful. The general practitioner especially should find the book acceptable as the treatment outlined is altogether medical and easily accessible. Many interesting case reports are given by the author and other prominent physicians. Published by F. A. Davis and Company. Price, $3.00.

Affections of the colon, rectum and anus are on the increase it seems or else knowledge on these subjects is becoming more common. The demand for information just on these subjects is more urgent than ever before. Seven years ago Frank C. Yeomans brought out his book on Proctology, which was a treatise on the malformations, injuries and diseases of the rectum, anus and pelvis. He is Professor of Proctology in New York Polyclinical Medical School, as well as many other connections that attest his prominence and outstanding ability. The advancements in this subject have been recorded in this revision, twenty five new illustrations have been added. The injection treatment of hemorrhoids has been given full consideration, full consideration has been given to carcinoma of the rectum by irridation and by incision as well as much other new and valuable information. In this book theoretical discussion is limited and practical work is given prominence by many illustrations, some in original and some in colors. Each subject is treated systematically and in orderly fashion, taking up first the etiology, pathology, symptoms, diagnosis, prognosis etc. Various methods of treatment of these conditions are discussed and their values compared. The newer methods of treatment by Roentgenray rays, radium, chemotherapy and electrothermy receive merited attention.

Published by D. Appleton and Company 661 pages. Price $10. 00.

ELECT OFFICERS

The Arkansas Medical Society named Dr. S. J. Wolferman, of Fort Smith, president-elect today and selected Texarkana as its 1938 meeting site at the concluding session of the 62nd annual convention.

Dr. O. J. T. Johnston, of Batesville, becomes president, succeeding Dr. George B. Fletcher, of Hot Springs. He was elected last year.

Dr. Wolferman, retiring councilor of the 10th district and chairman of the state council, defeated Dr. A. J. Buchanan, of Prescott, secretary of the state board of medical examiners, 27 to 26.

Other officers elected: Dr. H. Fay Jones, of Little Rock, first vice-president; Dr. J. H. John, of Pine Bluff, second vice-president; Dr. L. C. McVal, of Marion, third vice-president; Dr. R. J. Calcote, of Little Rock, treasurer (re-elected); Dr. W. R. Brooksher, of Fort Smith, secretary (re-elected).

Dr. Brooksher was named delegate to the American Medical Association meeting with Dr. George Fletcher, of Hot Springs, as alternate.

Councilors elected are Dr. H. A. Stroud, of Jonesboro (first district); Dr. T. J. Stewart, of Wynne, (third district); Dr. R. B. Robbins, of Camden (fifth district); Dr. Euclid M. Smith, of Hot Springs, (seventh district); Dr. B. L. Owens, of Harrison, (ninth district); and Dr. Clyde McNeil, of Rogers, (tenth district).

Dr. Harry Wilkins, associate professor of neurosurgery, University of Oklahoma Medical School, was principal speaker on the final scientific session. Other speakers were Dr. J. Hoy Sanford, of St. Louis; Dr. A. M. Elton, of Newport; Dr. Robert Mood, of Russellville, and Dr. Ernest Harl White, of Little Rock.

LAMAR HOTEL—HEADQUARTERS

Meridian, Lauderdale County, Mississippi

Meridian is a city of forty thousand population—65 per cent of which is white.

Immediately surrounding the city is a population of approximately three hundred thousand people of thrifty, hard working, law abiding Anglo-Saxon stock.

Meridian has a commission form of government, headed by a mayor and two commissioners. It is the boast of Meridian that it is one of the best governed cities in the entire South.

Meridian is located on seven trunk line railroads, and three transcontinental highways, No. 11, 80, and 45, which make possible rapid and comfortable travel in and out of Meridian to and from every section of our state and country.

Meridian has three strong stable banks, under the direction of men whose business judgment and foresight are doing much to guarantee the financial stability of our city and section and to promote the economic progress of all business interests.

Meridian has a splendid supply of hydro electric power.

Meridian is supplied with an inexhaustible amount of natural gas at reasonable rates.

The city's water plant is owned and operated by the municipality. The rates charged for water are low and its quality is of the best. The equipment is modern and the supply adequate to a city of one hundred thousand people.

The only federally supervised stock yards in the state are located in Meridian. The new and recently built yards furnish a market and stock trading facilities to the people of this entire section.

Meridian is an industrial center with an annual payroll of $12,500,000.00. Meridian has knitting mills, fertilizer plant, brick and cement plant, mop and broom factories, foundries, packing houses, wood-working, furniture and planing mills, mixed feed and grain mills, creameries, shirt and dress factories, etc. The railroad shops have an annual payroll of $1,500,000.00. An agricultural center and a dairy center.

Meridian is growing, everybody wide awake; new business blocks; new homes; new industries. A city of beautiful homes, schools, churches. A city of civic pride, public spirit, progressiveness. Biggest, busiest, best city of its size in the world. Meridian invites you for a visit.

DR. JOHN C. CULLEY

Dr. John C. Culley, who was recently made a member of the Alpha Omega Alpha Honor Medical Society of Vanderbilt Medical School. This honor has been conferred upon Dr. Culley because of his great success in his profession and the contribution he has made as a surgeon, as well as his high scholastic standing as a student at Vanderbilt. He was initiated April 16 at the annual Alpha Omega Alpha banquet. Dr. Culley is one of three of the alumni-elect. The North Mississippi Medical Society is indeed proud to have this great honor conferred upon one of its members.

Dr. Culley has always been a leader in his community, both in medical and civic activities. During the World War, he was a member of the local Examining Board and held a commission as Captain in the S. A. T. C. at the University of Mississippi. He was on the medical faculty of the University of Mississippi until he became University physician, which position he now holds. He has held the position of county health officer in Lafayette county and has been a councilor of the State Medical Association. He is a past president of the State Medical Association, is a fellow of the American College of Surgeons, and is a fellow of the Southeastern Surgical Congress. He is a member of the Kappa Sigma and Alpha Kappa Kappa fraternities and is a Mason. He was a first president of the Oxford Rotary Club, being quite active in the origin of the club. He is owner of the Oxford Hospital and Training School for Nurses, which has graduated twenty-eight nurses.

Dr. Culley is a man of vision and he has the resourceful application to make the vision come true. He is very outstanding in his profession and at the same time he is very active and interested in every good cause as a citizen. The entire state rejoices because of this distinction that has come to Dr. Culley because it is fully merited.

Read the book reveiws. This month we have two books that will interest every person, be he practitioner or surgeon.

MISSISSIPPI STATE MEDICAL ASSOCIATION
and
COMPONENT SOCIETIES

The Physician*

GEORGE BASKERVILL, M.D.
Greenwood, Miss.

It should not be necessary to say to an intelligent company like this that the doctor of today strikingly differs from the doctor of yesterday. Personally I prefer to keep my youthful opinion of him, the old family physician. He was a present help in the time of trouble. He was the first to welcome the soul that arrived from God, and the last to say farewell to those who left the shores of time. He and his faithful horse, both growing old and gray, moved with meaning along the village streets. He carried deep secrets of mother-love, of throb of pains and ills, but his eyes grew moist with joy when some one stopped to thank him for the help he had always been glad to give. He was recognized as a peer in the community, and his advice was sought in every physical ailment. He was a gentleman of culture and ability, knowing the peculiar temperaments and family characteristics of his constitutents, and always on watch for the good health of his people.

The years have passed and he is gone, leaving behind a noble shadow in which we of a later day can well afford to walk.

"He was to all a father, brother, friend;
Their joys were his, their sorrows were his own.
He sleeps in peace where yonder willows bend
Above the violets that kiss the stone."

"The old-fashioned way" is a phrase loaded with power to stir the emotions, provided there is a limit to its inclusiveness. But this produced a Hipprocrates five centuries before Christ; in another century and country it produced a Harvey; in still another it produced a Hunter; in another it produced a Pasteur; in another it produced men as Matas, Osler, Ward, Southerland, the Mayos, Murphy, Crile, of Clevand and Howard A. Kelly, of Baltimore. Here is leadership, and here are gentlemen of the most strict and sacred honor. How largely and sacredly we have entered into their heritage and follow in their train, is for every man to answer in his own heart.

We are sure that the physician of an earlier time made the profession the grand object of his life, trying always to bring practice by his practice, and winning patients from every quarter because they believed that he, as a physician and friend, possessed true skill; and had faith in his brain and his heart and his hand.

As we pursue the significance of this truth into our present situation, it becomes logical that we think together for a while about *the physician and his patient.*

Just as one encounters in patients various attitudes toward illness, he likewise meets differing attitudes toward the treatment of sickness. This condition has been developed by the knowledge the patient has acquired from what may be called the "Paper Practice of Medicine."

Every doctor will agree that the less his patient knows about diseases and drugs the more easily he can be restored to normal. It was never intended that the public at large should be doctors, or that diseases should be diagnosed by newspaper articles, or that patients could be treated by mail. I am of the opinion that much harm has been done by too much syndicate writing by doctors in newspapers. People are attempting to treat themselves. Often you gentlemen have been called to see these people who have been thus treating themselves for diseases which they thought existed from what they had read in newspapers, when there was an entirely different condition existing. All of which simply proves the lasting truth of the old saying, "A little learning is a dangerous thing."

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*Read before the Delta Medical Society, Belzoni, October 14, 1936.

Public health, in my opinion, should be the only source where the people should get the information necessary for them to know. Today the public is familiar with every new pill, ampule, or shot that is on the market, and often requests the doctor to give these, when they are, of course, ignorant as to the effect or the use of such preparations. In my humble judgment this has been the strongest means of taking away the rightful place of precedence which, by every law of logic, belongs to the physician.

The physician of an earlier day was not forced to encounter this particular difficulty. But these men read, marked, and inwardly digested everything pertaining to the profession. And I am wondering if we could have done as much as they did with their limitations; with practically no laboratory facilities or equipment with which we are so familiar today. Yet these men were highly educated and seemed to have been endowed with unusual common sense. Their clear-cut and broad way of reasoning in making a diagnosis formed principles which we are still using.

It would be wonderful if we could foresee fifty years from now when all ductless glands or glands of internal secretion will possibly be thoroughly understood; and the power that the mind has over the body; and the means by which the nervous equilibrium can be controlled. Then it would be easy to know why some great grief, or fear, causes one's hair to turn gray overnight, and to explain why a nervous woman, in the heat of passion or anguish, causes convulsions in her babe when she puts it to her breast.

Gentlemen, whatever the difficult places we meet, we do well to remember that we are gentlemen, and should ever do our best to hold the profession up to the high plane established by noble men who have gone this way before. We should never forget that our first duty is to the patient, and that the great test of medical skill is curing the sick. This being our mission, there can be no such low thing as camouflage in the practice of medicine or surgery.

Please turn your thinking now to another vital phase of *The Physician,* which I choose to call, *The Physician and the Minister.*

The minister often enters the hushed house. He is admitted by a form on tiptoe, and shown into a front room. He sees the doctor's hat and gloves upon the table. He waits for admission to the sick-chamber. He hears at length the bed-room door softly open, and as softly close. There is a whispered conversation in the passage. Then the doctor enters. A formal interchange of common-place greetings take place between the two men. Then the doctor seizes his hat and gloves and hurries off. The minister and the physician have met and parted without recognizing that they are brothers! That is the pathos of it!

How often they meet, and how little they know each other! The doctor gets into the way of regarding his work as distinctly physical, and the minister's as distinctly spiritual. They both become the victims of what may be called "the water-tight compartment theory of life." As though any man could define the frontier-line at which the physical ends and the spiritual begins! The doctor is often called to deal with a man whose hurt no physician can heal. He suffers from a heart oppressed, a mind diseased, a soul that has gotten out of gear.

And, in exactly the same way, a minister is often called to confront a haggard face, and to hear from quivering lips a story of strange inward darkness. And surely the truest comfort that he can give in such a case, oftentimes, is to tell the weary creature that her trouble is not spiritual but physical. It is not that God's care has failed her, but that her own frame has broken down. The body is jaded. The tissues are exhausted. The nerves have collapsed. She needs a physician.

These two, the doctor and the minister, cross each other's tracks so frequently, just because the physical and the spiritual realms with which they deal are so inseparable.

Pity the poor minister who thinks that the work of the doctor is purely physical! Could anything be more preposterous? And pity the poor doctor who thinks that the work of the minister is purely spiritual! It is absurd. Why an indiscreet minister can nullify the most skillful treatment of the wisest physician, and a wise minister can powerfully fortify the modest efforts of the most feeble physician.

Dr. R. S. Mullin, of Clarendon, Iowa, recognized this in an address which he delivered to ministers not long ago. "Give us all the help you can," he pleaded. "Let the minister never shake the confidence of a patient. I have often lost a case simply because the sufferer became convinced, in spite of my assurances, that she would get well. Never, for the patient's sake, find fault with the doctor. Don't advise the patient to try another physician. Avoid standing at the foot of the bed and staring the sick one out of countenance. Take his hand, and greet him cheerfully. Let your stay be short, pleasant, and hopeful. Behave yourself so that, after you have gone, the patient will say to the nurse, 'I am glad he came.'"

Then let the physician know, always, that he and the minister are the best of friends and partners. They go together. "In every place that I have been in yet," said Piper Tom to Evelina, in Myrtle Reed's "Spinner in the Sun," "there has been a minister and a doctor." Exactly! They are inseparable. And that is why they are so often found in the hushed house together.

Gentlemen, we have not learned well, if we have not found that the greatest of all physicians is Nature. The longer I practice medicine, the more I respect this great partner. This vital force of Nature is truly a great doctor, and it behooves us to always be on the alert to know when to advance and when to retreat and leave the battle to this able physician. For, regardless of the schools we attend and the degrees we hold, we must recognize the fact that we can act only in the capacity of assistants and operate only along the lines established by this ever-ready helper.

Within the present generation, since becoming more fully acquainted with the fact that nature stands constantly on guard with its trained morbific agent that may presume to invade the sacred precincts of life and health, we find a tendency to let the pendulum swing too far in the opposite direction. In all self-limited diseases we see the active interference and leave the contest of the pathological forces, entirely to the vital energies of nature.

We discover ourselves growing timid in the employment of active medication through fear that we may cripple the healing processes of the vital forces. This is an error to be guarded against because there is always an opportunity and a demand for our assistance in protecting, encouraging and strengthening the activities of the silent forces. Here, in fact, as all of us must know, lies the great secret of success in the practice of medicine.

My fellow-craftsmen, the reliance of humanity upon us as physicians skilled to heal the wounds and to cure diseases, naturally brings us in contact, on one side, with mankind's greatest earthly interests, and, on the other, with the glorious art of medicine. We are entrusted with secrets that would be confided to no other person, and are guardians to every family we attend. This being true, no other men can do humanity so much good as physicians. We deal with precious life itself, with the wasted form, the pallid cheek, the sunken eye. We see all of life's panorama from the entrance cry of infancy to the parting sighs of old age. This makes ours as noble a calling as exists on the face of the earth.

and the responsibility and glory of our sublime and ennobling profession, and the divine command: "Go heal the sick," ever in mind. Let us do all the good we can, to all the people we can, in all ways we can, remembering that every action, every word, every nod of our head, every quiver of our lips, will be observed and weighed. Therefore, we still strive to make our manner and our methods as nearly faultless as possible, knowing that our first duty is to our patient; our second only, to ourselves. All quackery reverses this principle as its fundamental axiom. Every practitioner who reverses it is a quack. A man who follows it may be ignorant, but his ignorance will sometimes be safer than a selfish man's knowledge.

We will, therefore, keep our lamps trimmed and our oil ready in attending all who commit themselves to our care; manfully striving to do our very best for every patient we attend, that may fill many bosoms with happiness and many hearts with gratitude. Then, perhaps, we shall be worthy to be called a Good Physician, and richly merit the coveted "Well done, thou good and faithful servant."

Drugs Used in the Treatment of Heart Disease*

JULIUS L. LEVY, M.D.
CLARKSDALE, MISS.

The purpose of this communication is to discuss briefly the various drugs which are of established value in the treatment of heart disease. No attempt has been made to cover in detail the entire field of treatment of cardiovascular disease.

I. Digitalis

The most valuable of all drugs used in the treatment of heart disease is digitalis. Although the most striking results from its administration are obtained in patients with congestive heart failure, auricular fibrillation, and a rapid ventricular rate, almost equally gratifying improvement not infrequently is produced in patients with heart failure and regular rythm. In the first group of patients, the administration of the drug causes a relatively prompt decrease in the rate at which the ventricles are beating. This slowing of the ventricular rate constitutes the most important effect of the drug in the presence of auricular fibrillation and is due to two separate pharmacologic actions, depression of the auriculo-ventricular node and stimulation of the vagus center in the medulla. Both of these actions serve to interpose an increased degree of block between the auricles and ventricles, and a decrease in the ventricular rate results. In patients with heart disease and regular rythm, the effect of the digitalis upon the vagus center and auriculo-ventricular node is of little or no importance, for the drug seldom exerts an appreciable effect upon the rate of the normally beating heart. In these patients, the beneficial effects of digitalis results from the direct effect of the drug upon the heart muscle, increasing the amplitude of ventricular contraction and the degree of systolic emptying. Digitalis has no constant effect upon blood pressure, and the diuresis which commonly follows its administration to edematous patients results from improvement of the circulation and not from a direct effect upon the kidneys.

The principal indication for the use of digitalis is the presence of myocardial failure, either with normal heart rythm or with auricular fibrillation or auricular flutter. In patients with auricular fibrillation or flutter, in whom the ventricular rate is rapid, the drug should also be employed even though there is no evidence of heart failure at the time. The use of digitalis is also indicated in a small group of patients in whom the symptoms and physical signs are equivocal and in whom one cannot be certain that myocardial insufficiency is present. For example, one occasionally sees patients with chronic pulmonary emphysema in whom the degree of dyspnea seems to be out of proportion to the physical findings. In situations of this kind, a therapeutic trial with digitalis may result not only in the patient's clinical improvement, but also may add greatly to one's understanding of the problem confronting him.

There are only two direct contra-indications for the use of digitalis, and these, fortunately, are rarely encountered. The first is the unusual case of high-grade heart block in which the additional auriculo-ventricular block due to digitalis results in Stokes-Adams seizures. In the majority of cases of heart block with congestive failure, digitalis may be given safely in therapeutic amounts, but the patient must, of course, be under close observation, preferably, with electrocardiographic control. The second contraindication consists of the rare individual who has an idiosyncrasy for digitalis. Frequent premature beats do not contraindicate the administration of the drug, except in those cases in which digitalis increases the number of the premature beats.

There are a number of standardized digitalis preparations on the market today, and the best course for one to follow is to become thoroughly familiar with one or two products and limit himself to their use. Pills, tablets, or capsules containing one and one-half grains of the drug (one cat unit) are to be preferred to the tincture, chiefly because the use of the tincture carries with it the liability of errors in dosage, due to confusing drops and minims. In all but a few patients, the drug is best given by mouth. Occasionally, however, either because of vomiting or because of the critical state of the patient, one must resort to intramuscular or intravenous administration. It is important to remember in this connection, that in the edematous patient, there may be an appreciable delay in the absorption of intramuscularly administered digitalis. In emergencies, where there is urgent need for digitalis action, therefore, the drug should be given intravenously. There are several preparations on the market for intravenous and intramuscular use. However, because these differ considerably in potency, it is advisable to become acquainted with one product and use it consistently. In very unusual circumstances, it may be necessary to administer the drug by rectum, as for instance, in order to maintain digitalization in a patient who has great difficulty in swallowing. For this purpose, the tincture may be given diluted with from 30 to 50 volumes of water.

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*Read before The Coahoma County Medical Society and The Clarksdale Hospital Medical Staff, December 9, 1936.

In order to obtain the most satisfactory results from the administration of digitalis, the patient must be completely digitalized. By this we mean that the drug must be given in sufficient amounts until the maximum therapeutic response is obtained or until the earliest symptoms of overdosage are produced.

For the adult, the average dose of from 1.5 to 2.0 grams of digitalis (15 to 20 c.c. of the tincture) is usually required to effect digitalization. Individuals vary greatly, however, and no practical purpose is served by attempting to calculate the exact dose on the basis of the patient's weight. The size of the individual doses of digitalis and the intervals at which they are administered are determined entirely by the seriousness of the patient's condition. When circumstances are such that digitalis effects are urgently needed, one may give 0.5 gram (7½ grains) for three doses at intervals of eight hours. If such rapid digitalization is not necessary, but there is need for relatively prompt action, 0.2 gram (3 grains) may be given three or four times a day for two or three days. In a large number of patients, however, no need exists for more than gradual digitalization, and in such individuals, it suffices to administer 0.1 gram (1½ grains) three times a day for one week. When any of these schedules has been carried to completion, the patient may still be incompletely digitalized, in which case 0.1 gram (1½ grains) should be given three times a day, until the full therapeutic effect of the drug has been obtained or toxic symptoms develop.

Once a patient has been completely digitalized, this state should be maintained by administering daily amounts of the drug, which are approximately equivalent to the amount destroyed by the body every twenty-four hours. For the average individual, this means the administration of 0.1 gram (1½ grains) daily, although either more or less of the drug may be necessary in individual cases.

When digitalis is given by mouth, it begins to manifect its effect in approximately two hours and does not attain maximum action for six or eight hours. In extremely ill individuals, such a delay may be inadvisable and the drug must then be given by intravenous injection. The usual initial dose is six c.c. (0.6 gram) providing, of course, that the patient has received no digitalis during the preceding two weeks. If the patient's condition is still critical after four hours, the same amount of the drug can be given again. After this, it usually is possible to complete digitalization by oral administration of the drug.

In patients with auricular fibrillation, the best index of digitalis effect consists of the slowing of the ventricular rate. When the ventricular rate has been reduced to sixty-six or seventy beats per minute, the patient may be considered to be completely digitalized, and the dosage of the drug should then be reduced to daily maintenance amounts. In individuals with congestive heart failure and regular rhythm, no single criterion of complete digitalization is available, and one must be guided by the patient's general, clinical improvement, in relation to the amount of digitalis given. Frequently, it becomes necessary in these individuals to continue repeated daily doses until the first symptoms of overdosage are produced. Anorexia or nausea usually are the first symptoms of overdosage observed, and if the drug is promptly discontinued for one or two days, when either of these develop, the patient suffers no appreciable inconvenience. If the drug is not omitted, more distressing symptoms may develop, namely: headache, vomiting, visual disturbances, and occasionally diarrhea and mental confusion.

II. Morphine and Sedatives

For the great majority of patients with congestive heart failure, morphine must be regarded as second only in importance to digitalis. Frequently, the patient with congestive failure has been so disturbed by dyspnea, cough, and anxiety that he has been unable to sleep for several nights before a physician is called. Few things are more striking than the changes which a night's rest produces in such an individual. Usually in patients with moderate or severe failure, it is advisable to administer morphine hypodermically for the first two or three nights, but after that, milder sedatives such as the bromides, phenobarbital, or some other barbituric acid derivatives suffice. If necessary, in order to control restlessness, the latter sedatives can also be administered in smaller doses two or three times a day. It is to be remembered that mental as well as physical rest is essential for the patient with congestive heart failure.

In patients with coronary occlusion, morphine should be given promptly in doses of one-fourth or one-half grain subcutaneously, and subsequent injections of one-fourth grain should be administered at intervals of from twenty to thirty minutes until the severe pain is relieved.

III. Diuretic Drugs

If edema still remains after complete digitalization of the patient with congestive myocardial failure, diuretic drugs should be administered. The most effective of these drugs are the purine derivatives and the mercurial diuretics. Of the purine derivatives, one may use theobromine sodiosalicylate, theobromine or theocin (synethetic theophylline). Theobromine sodiosalicylate is the least effective member of the group, but occasionally it produces satisfactory diuresis and possesses the advantage of seldom giving rise to toxic symptoms. It should be given in doses of one gram (15 grains) three or four times daily for five or six days. If diuresis does not result from this first course, nothing will be gained by further administration of the drug. Theobromine is given in doses of 0.6 gram (10 grains) three times a .day for two or three days, and the dose for theocin is 0.3 gram (5 grains) three times daily for two or three days. When these drugs produce satisfactory diuresis, they may be repeated, if necessary, after an interval of one week. Theocin is a more efficient diuretic than theobromine, but both drugs possess the disadvantage of frequently causing toxic symptoms—chiefly nausea, vomiting and headache.

Of the mercurial diuretics, salyrgan is most commonly used today. It is effective in a larger proportion of cases than are the purine derivatives and may be given alone or may be preceded by a course of ammonium chloride or ammonium nitrate. Salyrgan should be given intramuscularly, and a period of three to seven days should be allowed to elapse between injections. The initial dose usually is 0.5 or one c.c. and the subsequent doses are one or two c.c. Toxic symptoms are seldom produced.

IV. Quinidine

Quinidine sulphate is a drug of limited usefulness in the treatment of patients with heart disease. In certain situations, however, it does have great value, and it therefore is important that the indications for its use be clearly understood. The drug is used most commonly to reestablish normal cardiac rhythm in patients with auricular fibrillation or auricular flutter and it is also useful in the treatment of paroxysmal tachcardia, of either auricular or ventricular origin. Auriular fibrillation and auricular flutter are due to a circus movement, travelling about the orifices of the superior and inferior venae cavae, and quinidine, by prolonging the refractory period of the auricular musculature, tends to interrupt this movement. The rate of conduction through the auricular muscle also is diminished by the drug, and this tends to perpetuate the circus movement. It is, therefore, only when the first of these two effects predominates that normal sinus rhythm is re-established. It is generally accepted today that the great majority of patients with auricular fibrillation can be treated best by controlling the ventricular rate with digitalis and that only occasionally is the prognosis improved by restoring normal rhythm instead of maintaining a state of adequate digitalization. The drug may be given with advantage, however, to individuals who present little or no enlargement of the heart and no evidence of valvular disease and in whom auricular fibrillation has been present for only a short time. The field of greatest usefulness is in patients with little or no evidence of myocardial damage and no valvular disease in whom auricular fibrillation, which developed during hyperthyroidism, persists after operation. The drug should never be given to individuals who have suffered embolic accidents during the presence of auricular fibrillation.

Oral administration of quinidine sulphate is the only method safe enough to be justifiable. Many different systems of dosage have been suggested, but one of the most simple and effective consists of giving a test dose of 0.2 gram (3 grains) and following this, if no untoward symptoms result, by 0.4 gram (6 grains) at intervals of two hours for four doses. On subsequent days, 0.4 gram (6 grains) are given every two hours for five doses, and this is continued for a week if necessary. If toxic symptoms such as severe tinnitus, nausea, vomiting, diarrhea, or very rapid regular heart action develop, the drug must, of course, be discontinued immediately. Patients who are receiving quinidine should be in bed and under close observation, and preferably should be completely digitalized before administration of the drug is begun. After normal rhythm has been restored by quinidine, it frequently is advisable to continue the drug in doses of 0.2 gram (3 grains) two or three times a day for a period of a few weeks.

V. Miscellaneous Drugs

In conclusion, mention should be made of the use of drugs in patients with angina pectoris and in individuals with heart block and Stokes-Adams syndrome. For the relief of pain in angina there are no substitutes for the nitrites. Either nitroglycerine or amyl nitrite may be used, although nitroglycerine is to be preferred because of its greater convenience and because it produces disagreeable symptoms much less frequently than does amyl nitrite. For the prevention of attacks of angina pectoris, drugs are only rarerly effective. Aminophyllin and theominal, a combination of theobromine and phenobarbital, may be helpful at times and probably should be given a trial in all patients who have experienced anginal pain. Brandy or whiskey may also be administered in small amount, two or three times a day and may prove beneficial.

In patients with heart block and frequent Stokes-Adams attacks, it is often possible to prevent the seizures, or at least diminish their frequency by the administration of 1:1000 solution of epinephrine subcutaneously every few hours in doses of from 0.25 to one c.c. A similar result may be obtained by the administration of ephedrine hydrochloride in doses of 3-8 to 1-2 grain by mouth three or four times a day. Occasionally, high grade heart block is at least in part the result of vagus overactivity, and in these cases, the administration of atropine sulphate, by mouth or subcutaneously, reduces the degree of block and abolishes Stokes-Adams seizures. In the presence of prolonged ventricular standstill, none of these measures will be effective and one must adminster epinephrine by intracardiac injection (0.25 c.c. to 1 c.c. of 1:1000 solution) to re-establish cardiac activity.

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Public Health and the Physician*

V. B. HARRISON, M.D.
HOLLY SPRINGS, MISS.

This is a period of political, social, economical and moral revolution. Old standards are being exchanged for new, and principles once accepted as basic and fundamental have been replaced by others. The scenery, at present, is very confusing but it is not unlike the site of erection of a new edifice. There is a mingling of debris from razed antiquated buildings, piles of disorganized new materials, scaffolding, erection machinery and crews of artisans and laborers swarming about plying their trades. What uninformed spectator can possibly foresee the nature of the completed structure or its significance?

The art of healing with all its allied branches is not unlike a house of many rooms. Most men try in an inadequate manner to occupy the whole house, a few will concentrate their attention on one or two rooms, others will live in a few rooms and try to care for the remainder of the house, but it is as impossible for the average practitioner to occupy and furnish the whole house as it is for the average man to occupy and furnish the Buckingham Palace.

As continuous research is revealing new, hitherto undiscovered "rooms" which must be occupied, there has developed a tendency on the part of the physician to occupy a limited amount of "space" in preference to covering the whole "house". The ever increasing problems in medicine have called forth specialties for their solution, and once the problems are solved, the indications are that the specialties in a large measure will be reabsorbed in the general practice of medicine. Medicine duplicates the life history of the nautilus which periodically moves into a newly created room, leaving the old discarded room behind. In that new room, the general practitioner will find many of the specialties among which preventive medicine will be one. one.

Public health had its inception with, and is a child of, the medical profession. Its original purpose was to exercise a practice of medicine not possible by the individual physician, and to coordinate this practice with the regular practice of medicine. Under the wings of its foster parents, government and industry, it has made great strides, but exploitation and development has had a tendency to alienate the child from its true parent. The alienation has proceeded to such an extent that in many cases it bears little resemblance to its father, and has often incurred the wrath of its parent.

The medical profession has not always shown compassion for its child. Perhaps it is vanity, egotism, or even selfish commercialism that has incited the scorn. In many instances it is simple misunderstanding and lack of sympathy, but not infrequently it is justifiable disapproval of some health departments' rough shod methods and lack of consideration of the profession's inalienable rights. Too many non-medical men have come into public health work by the back door of doctor of philosophy or doctor of public health degrees, and they, with renegade physicians, are preaching sedition. Public health was created to supplement the regular practice of medicine, so "the shoemaker should stick to his last."

Public health has an important liasion position between profession, public and government. This position should be directed by a medical health officer, and it should not usurp the rights of the private practitioner. Organized public health has done what individual physicians could never do alone, that is, clear away the brush and undergrowth of preventable diseases. The clearing of this terrain has allowed the practitioner to pursue the recent advances in curative medicine unincumbered. It has been the constabulary and menial servant to the profession and lay public. It has educated the public to the importance of the profession in personal and community hygiene. It is, as it were, a sales agent for the profession. This alone is the duty of a health organization, and it has no more right to dictate the practice of private medicine than a policeman on his beat has the right to dictate to the merchants what goods they must sell or what price they may charge for their products.

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*Read before the North Mississippi Medical Society, Jan. 20, 1937.

The statement that public health is ruinous to the practice of medicine is as much without foundation as the statement that the earth is flat and is equally unsupported by facts. Actually, a public health program encourages the public to seek their physicians' ministry in health as in sickness. The field of medicine is too broad to be injured by the immunization program of public health, or any other of its branches of service. A practitioner who has not progressed beyond the realm of treating preventable diseases is not entitled to the confidences of the public, and one who has kept abreast of the times is not injured by a public health program. If public health can help improve the social and economical status of the community, it will proportionally improve the class of practice of the physicians in question. The decrease in prevalence of preventable diseases has brought into prominance other diseases. In the battle of life, those who weather the storm of the first line of defense have yet the second, third and so on lines to take before they die. Without doubt, there will always be work and sleepless nights for the present and future generations of physicians. The economical problems of the medical profession cannot justly be laid at the door of public health.

The problem of maternity and infant hygiene has been a challenge to the medical profession for some time. The public health agencies have attacked the problem with no view of encroaching upon the private practice of medicine, but to find a solution and to return the matter to the private practice of medicine. With the establishment of prenatal, postnatal and child welfare conferences it is hoped that the public will be educated to the importance of these services and will eventually seek them from their family physicians. No small part of this program is the midwife problem. Public health agencies recognize the necessity of having every obstetrical case under the care of a physician, but where the community's population is such as to encourage the midwife, then the second choice is to educate and supervise the midwife. To do otherwise is blind bigotry. The midwives are compelled to call a physician in the case with abnormalities. This practice, with the establishment and medical supervision of prenatal conferences, is bringing the patients into more intimate contact with the medical profession. The ultimate results will be the return of maternity cases to the private practice of medicine.

The medical and dental inspection and examination of school children eventually will be done by the private practitioners with, perhaps, the aid of a public health nurse. However, there first must be created a demand for the service as well as a general agreement on the uniformity of the program for the private practitioners.When the time is ripe, the various school authorities can require a certificate for entrance into school each year. This certificate might require immunization and a dental examination with the necessary corrections. The administrative part of the revised program could be borne jointly by the health department and schools.

The modern system of medical education is training men to practice preventive as well as curative medicine. By the time the combined practice becomes generalized throughout the profession, the now organized health departments will have educated the public to the practice of seeking preventive as well as curative practice from their physicians. When such a state has been reached, the public health program will relinquish its field of active preventive medicine. However, that time is not near, and much pioneering is yet needed. Public health has a big problem before it . It must pave the way for the profession, public and government so that progress will be smooth. The education of the public is perhaps its greatest task and the one most beneficial to the medical profession.

When the private practitioner takes over the work of preventive medicine, it will in no way terminate the usefulness of a public health organization. The vista open to public health work is too broad, and the objectives too numerous to be stopped by the transfer of the preventive medicine program back to the profession. There is much yet to be accomplished in the fields of sociology and education. Sanitation and other police duties may be transferred, but not successfully, to other organizations. Above all, the administrative program has not been fully developed. Medical research has much yet to give the profession, and there is room for improvement in the field of statistics, both vital and morbidity statistics. The visiting nursing service, once strongly sponsored but lately losing its strength, may prove of assistance to the general practitioner. Public health can easily supplement the diagnostic facilities of the practicing physicians by means of teaching and consultation service and clinical laboratories.

There is need of a well organized and centralized community social service. Since the depression there has been numerous attempts to establish such an organization, but the decentralization has impaired its efficiency. Socialogical progress is at present mostly theoretical, but it promises to become practical in the near future. This work might well be conducted as a branch of public health, or, if separate, in close cooperation and coordination with the established health department. Organized social service can be of material benefit to the medical profession as well as to other interested groups.

The problem of the indigent will perhaps never be satisfactorily solved. The question is paramount in every community from a general economic standpoint. Education and economic readjustment will in a measure decrease the prevalence of indigency. General improvement in individual health and community sanitation will offer some aid. Some sort of medical, social and economic care will always be necessary for a few, but, contrary to the general public opinion, primary medical care is not the most essential need.

Not the least among the pending immediate public health problems is the question of syphilis control. The "growing pains" of this problem are not unlike those suffered by the other and now firmly established public health practices. The age old controversy between public health and the private practitioners is being resurrected on this issue. Public health's position on this, as in past issues is to aid the profession in the solution of the problem. As in the case of other communicable diseases, the private physician acting alone and independently can not successfully cope with the situation. Coordinated action and cooperation between public health and the profession will hasten the equitable solution of this problem to the best interests of both parties and the least possible detriment to either party.

It is a notorious fact that physicians as a body do not cooperate very well. The lack of uniformity in the profession must be corrected before a large portion of the present practice of preventice medicine is returned to the general practitioner. In other words, certain principles of public health must be standardized in private practice. Public health is here to stay, but in the near future it will move on ahead, acting as trail blazer for the medical profession and, having solved the new problems, will in turn, turn them over to the profession for execution.

Mississippi State Medical Association

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Manuscripts and all material for publication should be addressed to the editor, P. O. Box 303. Vicksburg, Mississippi.

EDITORIALS

FROM OUR PRESIDENT

TO THE MEMBERS OF THE MISSISSIPPI STATE MEDICAL SOCIETY

My dear Doctors:

I hope that I will have the pleasure of seeing everyone of you at the meeting of the Mississippi State Medical Association, and also at the meeting of the Mississippi Pediatric Society, on Monday afternoon and night, May 10th.

I have never seen a better program of the Mississippi State Medical Association. The list of essayists reveals the names of some of the most outstanding physicians that this country has ever known. This meeting is going to be a real treat to the medical profession of this state. It is essentially a postgraduate couse. If you miss hearing any one of these essayists, you are going to miss something that would really be worth hearing. The program committee of the Mississippi State Medical Association, has done a most wonderful work. The members have cooperated with me in the preparation of this program to the fullest extent, and I publicly acknowledge herewith, my profound appreciation for their splendid cooperation, and at the same time, congratulate them for one of the most outstanding programs that has ever been arranged for the Mississippi State Medical Association.

The Mississippi State Pediatric Society, of which I am also president, has arranged its program primarily in the interest of the general practitioner. The subjects listed on this program are such that every practitioner of medicine should hear. This is **REALLY** a postgraduate course in pediatrics for you. Let me urge you to arrive in Meridian at noon, Monday, May 10th., and remain through the afternoon and night programs of the Mississippi State Pediatric Society! The banquet will be held in the Blue Room of the Lamar Hotel, Meridian, Monday night, May 10th at 6:30. You are cordially invited to attend the meetings and participate in the banquet!

To those of you who will be detained and will not be able to get to these meetings I would like to extend to you my heart full of gratitude for your loyal cooperation, and for the honor that you have bestowed upon me throughout the past year. I assure you that I consider it the greatest honor that could have been conferred upon me, by anyone, at any time or place. I want you to know that I appreciate it.

I will consider it an honor to have the pleasure of your presence at these meetings. All of you who expect to attend the banquet, are urged to write me a card, in order that I may make the necessary banquet reservations.

With anticipated pleasure of seeing you at these meetings, and with a heart full of gratitude and love for you, I am,

Sincerely and fraternally yours,

Harvey F. Garrison, president,
Mississippi State Medical Association.

PROGRAM

Seventieth Annual Session

Mississippi State Medical Association

and

Thirty-Fourth Annual Session

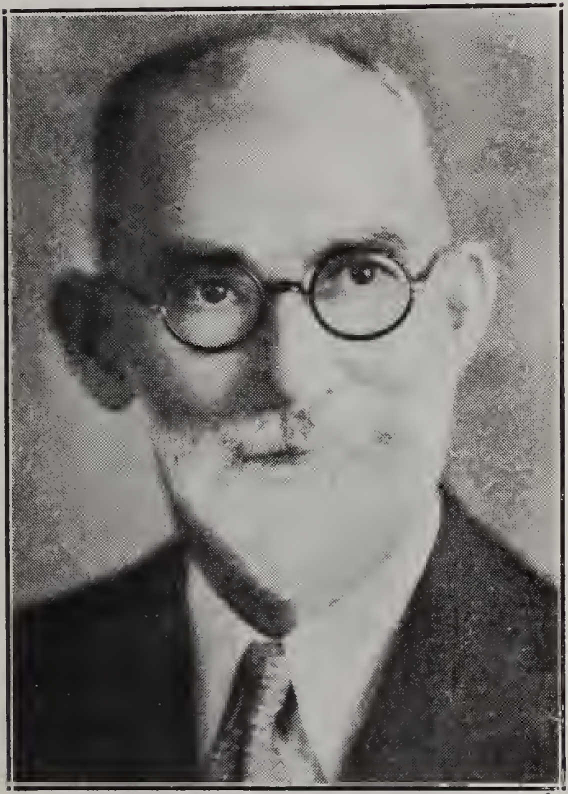
House of Delegates

May 11, 12 and 13, 1937

Lamar Hotel, Meridian, Headquarters

OFFICERS 1936-1937

President, Harvey F. Garrison, Jackson.



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1928-1929, W. H. Frizell, Brookhaven.
1929-1930, H. A. Gamble, Greenville.
1931-1932, J. C. Culley, Oxford.
1932-1933, J. M. Acker, Jr., Aberdeen.
1933-1934, J. W. D. Dicks, Natchez.
1934-1935, E. C. Parker, Gulfport.
1935-1936, J. R. Hill, Corinth.

Executive Business

Tuesday, May 11, 1937, 8:00 a.m.
Meeting of Council and House of Delegates
Convention Hall, Adjoining Lamar Hotel

Subsequent Meetings Will Be Arranged By the House.

ORDER OF BUSINESS

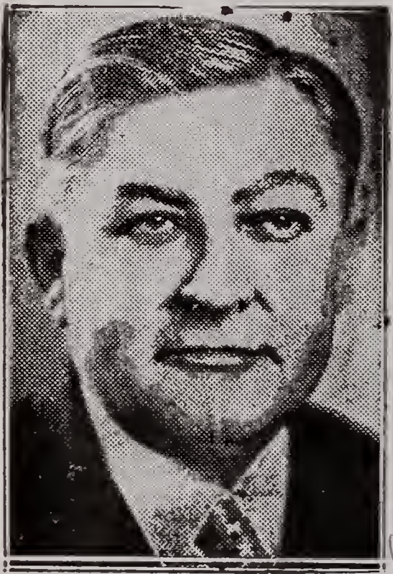
1. Call to order.
2. Roll Call.
3. Reports of Officers: Secretary, Treasurer, Historian, Editor.
4. Reports of Committees.
5. Unfinished Business.
6. New Business.
7. Report of Council.
8. Report of Nominating Committee.
9. Election of Officers.
10. Selection of Next Meeting Place.
11. Reading and Approval of Minutes.
12. Adjournment.

General Meeting—First Day

Tuesday, May 11, 1937
Convention Hall, Adjoining Lamar Hotel
Session 1:30 p. m. to 6 p. m.

1. Call to Order—President Harvey F. Garrison, Jackson.
2. Invocation.

SECTION ON MEDICINE



Joseph E. Green, Laurel, Chairman.

B. Lampton Crawford, Tylertown, Vice-Chairman.

Stanley Hill, Corinth, Secretary.

1. The Proper Management of Home Deliveries and Report of My Experience of More Than Three Thousand Deliveries.—B. Lampton Crawford, Tylertown.

Discussion opened by R. C. Eley, Pascagoula, and Ras Walker, Magee.

2. The Acute Abdomen In Children.—Joseph Brennemann, Chicago, Illinois.

3. Amoebic Dysentery: A Problem In Mississippi.—R. B. Caldwell, Baldwyn.

Discussion opened by A. H. Little, Oxford, and Gilruth Darrington, Yazoo City.

4. The Diagnosis and Treatment of Diseases of the Esophagus.—Paul Holinger, Chicago, Illinois.

5. Helpful Hints In The Diagnosis of Gastro-Intestinal Diseases.—Walter C. Alvarez, Rochester, Minnesota.

6. The Diagnosis, Dietary Management and Treatment of Gastric and Duodenal Ulcers By The General Practitioner.—Seale Harris, and Seale Harris, Jr., Birmingham, Alabama.

7. Bronchoscopy As An Aid To Diagnosis.—Murdock Equen, Atlanta, Georgia.

8. The Role of Surgery In The Treatment of Chest Diseases.—John Harter, Sanatorium.

Discussion opened by M. L. Flynt, Meridian, and Henry Boswell, Sanatorium.

EVENING SESSION, 8 o'clock

Tuesday, May 11, 1937

The public is cordially invited.

1. Invocation.—Rev. Joseph A. Smith, Meridian.
2. Addresses of Welcome: On Behalf of the City of Meridian.—Mayor Clint Vinson, Meridian.

On Behalf of the East Mississippi Medical Society.—T. E. Royals, Meridian.

3. Response to Addresses of Welcome.—G. S. Bryan, Amory.
4. In Memoriam.—By the Secretary.
5. President's Address.—The Child.—Harvey F. Garrison, Jackson.
6. Ewing Fox Howard Oration.—What Can Be Done To Cure Cancer? (Issustrated).—William D. Haggard, Nashville.

SPECIAL SESSION

Wednesday, May 12, 1937, 8 a.m.

Alberta Theatre

Caesarian Section, With Demonstration of Dr. DeLee's Talking Picture on Laparo-Trachelotomy, H. R. Shands, Jackson.

SECTION ON SURGERY

Willis Walley, Jackson, Chairman

We are sorry we did not secure a cut of Dr. Walley, chairman of the section on surgery. We would have been mighty glad to have had this added asset to our journal. You would have seen that his good looks was in keeping with his fine ability to arrange a program on surgery. This is one of the strongest programs this section has had in many years. We congratulate Dr. Walley and appreciate his fine work.—Ed. Miss. D.

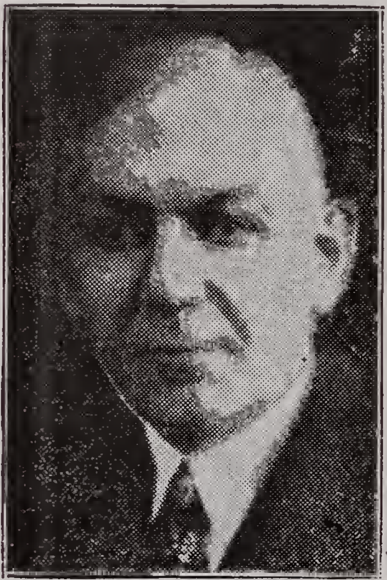
H. Lowry Rush, Meridian, Vice-Chairman

W. H. Anderson, Booneville, Secretary

Wednesday, May 12, 1937

Convention Hall, Adjoining Lamar Hotel

Session 9:00 a.m. to 12:30 p.m.



1. The Present Status of Fractures of the Neck of the Femur.—Willis Campbell, Memphis, Tenn.

2. Fundamental Principles in Recognizing and Treating Infections of the Hand.—I. P. Burdine, Amory.

Discussion opened by Stanley Hill, Corinth, and Thomas Blake, Jackson.

3. Caesarean Section.—H. R. Shands, Jackson.

Discussion opened by J. F. Lucas, Greenville, and M. Q. Ewing, Amory.

4. Thyroidectomy: Factors Influencing Mortality.—B. C. Elkin, Atlanta, Georgia.

5. Wounds of the Heart.—W. W. Crawford, Hattiesburg.

Discussion opened by R. J. Field, Centreville, and E. C. Parker, Gulfport.

6. Summary of the Neuralgias and Ear Symptoms Associated with the Mandibular Joint.—J. B. Costen, St. Louis, Mo.

7. The Surgical Treatment of Phthisis Pulmonalis.—W. H. Sutherland, Booneville.

Discussion opened by J. W. Barksdale, Jackson, and J. W. D. Dicks, Natchez.

8. Differential Diagnosis of Acute Conditions of the Abdomen.—H. N. Hayes, N. Albany.

Discussion opened by John C. Culley, Oxford, and R. D. Kirk, Jr., Tupelo.

SECTION ON HYGIENE AND PUBLIC HEALTH

F. J. Underwood, Jackson, Chairman

T. P. Haney, Jr., McComb, Vice-Chairman
N. C. Knight, Clarksdale, Secretary

Wednesday, May 12, 1937
Convention Hall, Adjoining Lamar Hotel
Sessions 2:30 p.m. to 6:00 p.m.

1. Chairman's Address—New Trends in Public Health.—Felix J. Underwood, Jackson.

2. The Private Physician's Part in the Control of Syphilis.—Dr. R. A. Vonderlehr, Washington, D. C.

Discussion opened by Dr. W. K. Sharp, New Orleans, and A. G. Ward, Jackson.

3. Results and Implications of a Countrywide Syphilis Survey.—W. Frank Walker, New York, City; T. Paul Haney, Jr., McComb; and H. C. Ricks, Jackson.

4. Serological Tests for Syphilis and Their Interpretation.—T. W. Kemmerer, Jackson.

Discussion opened by John B. Howell, Canton, and B. N. Walker, Jackson.

5. Syphilitic Meningitis with Ocular Manifestations (A Case In Point).—Dr. Van Dyke Hagaman, Jackson.

Discussion opened by Adna Wilde, Jackson, and A. G. Touchstone, Meridian.

(To be continued Thursday morning)

SECTION ON HYGIENE AND PUBLIC HEALTH

(Continued from Wednesday morning)

Felix J. Underwood, Jackson, Chairman.
Thursday, May 13, 1937
Convention Hall, Adjoining Lamar Hotel
Session 9:00 a.m. until completed.

6. Post Graduate Medical Education.—H. W. Kostmayer, New Orleans, La.

Discussion opened by Dr. Maxwell E. Lapham, New Orleans, and J. A. Milne, Jackson.

7. The Modern Concept of Sinus Surgery Versus the Idea Once a Sinus Always A Sinus.—Virgil Payne, Pine Bluff, Arkansas.

Discussion opened by Dr. Lon W. Dotson, West Point, and E. Leroy Wilkins, Clarksdale.

8. Rural Obstetrical Service, Quality, and Quantity.—R. C. Eley, Pascagoula.

Discussion opened by B. L. Crawford, Tylertown, and W. C. Simmons, Bay Springs.

9. A Proposed State-Wide Rabies Control Program in Mississippi.—E. S. Brashier, D. V.M., State Veterinarian, Jackson.

Discussion opened by A. L. Gray, Jackson, and John W. Shackelford, Greenville.

House of Delegates

OUR PRESIDENT-ELECT

Since Dr. Little is in bed from a third relapse of intestinal influenza, I am sending you his letter for the Journal. He is very anxious for a large increase in the membership of the association and appreciates this opportunity to encourage such a campaign.

He wants you to know that he has been quite sick but is much better now.

Wesson, Sincerely,
March 30, 1937. Mrs. W. L. Little.

MEMBERSHIP

The report of our secretary, Dr. Dye, on March 20th shows a decided improvement in paid membership over his report of February 20th. This is more noticeable within the smaller medical societies, fourteen of which show a membership of 71.27 per cent, against eleven multiple county societies showing only 58.85 per cent. Five societies now show a gain in membership over last year; seven societies have the same membership; and thirteen societies show a loss in membership from 2 to 33 per cent. The greatest gain over 1936 is shown by northeast Mississippi, the greatest loss by 3 of our largest societies, one of which is a disappointment to me since we are soon to be their guests.

I am requesting that the Mississippi State Association under the direction of our councilors and secretaries, begin at once one of our greatest membership campaigns. There are now many splendid physicians in Mississippi who seem to have little interest in the medical affairs of our state. This membership campaign should be continued throughout the year. It should be conducted so as to allow that all dues be given to new members who join the association after July first. I am sure that a large per cent of desirable members of our profession who are out of the association will become permanent members after they have attended the fall and winter meetings of their respective societies. After joining the Mississippi Association they will receive the journal of the society—*The Mississippi Doctor*—which contains the best papers presented by our profession, not only from Mississippi but from other states. It includes the social happenings of the physicians thereby creating a closer fellowship among the doctors.

If this plan is carried out by those who are really interested in the State Association and in the advancement of medical science, our 1938 membership could show the greatest gain in the state's history.

Wesson, W. L. Little,
March 30, 1937. President-Elect

WHAT IS WRONG?

In another column are given some figures on membership in the Mississippi State Medical Association. Certainly more than 60.5 per cent of the white physicians of Mississippi should be interested enough in the high purposes and efforts of organized medicine to better the service given to the sick and the lot of the doctor to affiliate hemselves with their county or district medical societies, the State Medical Association, and the American Medical Association. When it is realized that membership in a local or district society brings opportunity for periodic gathering and discussion with fellow physicians, for hearing and taking part in programs arranged to help, carries with it membership in the State Association and in the American Medical Association, brings eligibility to fellowship in the American Medical Association and eligibility to membership in the Southern Medical Association, gives medical defense protection by the Council of the State Medical Association, and, incidentally, provides each month an official journal of which it is hoped medical men of Mississippi may be proud, it is difficult to understand why any doctor of Mississippi should be found out of the fold.

BUT — approximately 40 per cent of the licensed white physicians of Mississippi were not members of the Mississippi State Medical Association on March 20. The figures show that more than half of the societies of the state have actually fewer members than last year.

Are we doing all that should be done to bring into the Association those doctors who should be members? Presumably all white physicians who hold licenses to practice medicine in this state are eligible for membership. Actually, possibly there are some who would not be passed by the boards of censors if application was made. But these must be few when it is realized that it is the purpose of organized medicine to raise the standard of medical practice and to aid the practicing physician in his problems.

Do the county and district societies by their programs attract the ordinary doctor? Are the meetings within his reach? There is probably some reason to feel that some at least may be lacking. The ordinary doctor, and this means most of the doctors of Mississippi, is eager to discuss his everyday problems with his fellow practitioner who has the same problems, with the fellow he knows, if he can meet him without leaving his practice for an extended time and can remain within call if needed.

It is believed that monthly short sessions with the men whom he knows are more attractive than meetings two or four times a year which require travel the greater part of a day and a night to hear specialists discourse on rare conditions which he sees rarely or never and which would be referred should they be encountered. He needs intercourse and intimacy with the men who are doing the same kind of work. Perhaps the small county society, easily within reach, with papers and discussions of everyday problems, would mean more to him. Perhaps if he was asked to appear on the program to open a discussion of his everyday work, he would be more interested. The figures for membership in single county and multiple county societies would seem to indicate this. If his society meets every month, he gets the habit of attending. If a supper or social hour is included in which he may talk with his co-workers informally, when he is "one of the boys," he will like it so much better.

Membership starts in the local society. The set-up for organization is good. The president-elect under the direction of the president of the State Association, is in charge of organization. He works through the vice-presidents and the councilors, and they through the societies, usually the secretaries. Some men need encouragement, a direct invitation to take part. Vice-Presidents, often forgotten, could do much in each locality to build membership for the good of all.

The membership of the Mississippi State Medical Association should be at least 1100 this year. Why not?

MEMBERSHIP—MISSISSIPPI STATE MEDICAL ASSOCIATION

SOCIETY	Members Feb. 20, 1937	Members Mar. 20, 1937	Members 1936	White Physicians in Jurisdiction	Per Cent Members, 1937
1. George County	5	5	0	5	100.00
2. Jefferson County ...	4	4	4	4	100.00
3. Pike County	24	24	25	25	98.00
4. Tate County	0	10	11	11	90.91
5. Franklin County	6	6	5	7	85.71
6. Wilkinson County ..	5	5	5	6	83.33
7. Jackson County	9	9	11	11	81.82
8. Adams County	16	16	18	20	80.00
9. DeSoto County	0	9	8	12	75.00
10. Tri-County	33	33	33	44	75.00
11. Issaquena-Sharkey-Warren	37	38	38	54	70.37
12. Amite County	6	7	8	10	70.00
13. Central	150	150	165	217	69.12
14. N. E. Miss.	126	133	129	208	63.94
15. Clkde & Six Counties	53	53	58	84	63.10
16. North Mississippi ..	50	53	59	85	62.35
17. Winona District	46	48	49	81	59.26
18. East Mississippi ..	56	64	79	109	58.72
19. Claiborn County	0	4	4	7	57.14
20. Harrison County ..	25	26	39	49	53.06
21. Delta	69	71	99	144	49.31
22. Hancock County	4	4	4	9	44.44
23. South Mississippi ..	48	48	56	139	34.53
24. Clarke-Wayne	5	7	5	21	33.33
25. Stone County	0	0	0	5	00.00
TOTALS	777	827	903	1,367	60.59

SOCIETIES SHOWING GAIN IN MEMBERSHIP

SOCIETY	Last Year	Mar. 20, 1937	Gain	Per Cent
George County	0	5	5	500.00
Clarke-Wayne	5	7	2	40.00
Franklin County ..	5	6	1	20.00
DeSoto County	8	9	1	12.50
N. E. Mississippi ..	120	133	13	10.83

SOCIETIES SHOWING SAME MEMBERSHIP

Society	Last Year	Mar. 20, 1937
Claiborne County	4	4
Hancock County	4	4
Issaquena-Sharkey-Warren	38	38
Jefferson	4	4
Stone	0	0
Tri-County	33	33
Wilkinson County	5	5

SOCIETIES SHOWING LOSS IN MEMBERSHIP

SOCIETY	Last Year	Mar. 20, 1937	Loss	Per Cent
Winona District	49	48	1	2.04
Pike County	25	24	1	4.09
Clarksdale and Six Counties	58	53	5	8.62
Central	165	150	15	9.09
Tate County	11	10	1	9.09
North Mississippi ..	.59	53	6	10.17
Adams County	18	16	2	11.11
Amite County	8	7	1	12.50
South Mississippi	56	48	8	14.29
Jackson County	11	9	2	18.18
East Mississippi	79	64	15	18.99
Delta	99	71	28	28.28
Harrison County	39	26	13	33.33

COMPARISON OF MEMBERSHIP IN SINGLE COUNTY MULTIPLE COUNTY SOCIETIES

SINGLE COUNTY SOCIETIES

Number	Members	White Physicians in Jurisdiction	Membership Per Cent
14	129	181	71.27

MULTIPLE COUNTY SOCIETIES

Number	Members	White Physicians in Jurisdiction	Membership Per Cent
11	698	1,186	58.85

AN APPRECIATION

To the Membership of the
Mississippi State Medical Association:

During the period of his presidency of the Mississippi State Medical Association, Doctor Harvey Garrison, Sr., has demonstrated his fitness for the position he has filled so honorably, and because of his untiring zeal has succeeded in putting forth those principles that have made for the betterment of our organization and the advancement of organized medicine in Mississippi.

The entire membership is indebted to Doctor Garrison for the wonderful work he has done, for his administration has indeed been an outstanding one in the annals of our Association.

Jackson, J. P. Wall,
April 3, 1937. Speaker House of Delegates.

SECOND COUNCILOR DISTRICT

Owing to incomplete returns from secretaries, I am unable to give a full report. However, sufficient to say, that this district in percentage of membership will lead the other districts and will show an increase over a year ago.

Secretaries Little, Eason and Minor have been active as have Presidents Wood, Smith and Wright.

I am sure that our meeting in Meridian will be a success: President Garrison and President-Elect Little have been active all over the state. I hope to see you there.

This district in my opinion, will favor a change in date of the meeting of our state association; two weeks' earlier will increase the attendance; the middle of May has so many other attractions.

Rt. 4, Memphis, Tenn. L. L. Minor,
April 6, 1937. Councilor.

FRATERNAL DELEGATES

Each year the Mississippi State Medical Association elects fraternal delegates to attend the annual meetings of the State Associations of neighboring states. This year they are as follows:

Alabama: Dr. G. Lamar Arrington, Meridian.
Louisiana: Dr. R. H. Brumfield, McComb.
Tennessee: Dr. I. B. Seale, Holly Springs.
Arkansas: Dr. Paul Gamble, Greenville.

As has been said many times before, much good can come of an exchange of ideas and information as to how the other fellow works.

In the past it has been extremely rare for a fraternal delegate to make a comprehensive report of the meeting he has attended as a representative of this association. It is to be hoped that this year will prove an exception and that at the meeting of the House of Delegates at Meridian all of the fraternal delegaes will present reports of the meetings in states which they have attended.

MEETING OF SOCIETY SECRETARIES

Dr. F. M. Acree, Greenville, secretary of the Delta Medical Society, is endeavoring to arrange for a round table luncheon meeting of the secretaries of the medical societies making up the Mississippi State Medical Association at Meridian during the annual meeting of the State Association.

Dr. Acree says, "Frankly, I believe that organized medicine in Mississippi will be helped by such a meeting. Since the success of the meetings of component societies depends a great deal on the work of the secretaries, I think it would naturally follow that the better the meetings of the component societies the more interest would be manifested in organized medicine. This in turn rebounds to the credit of organized medicine in the state."

Such a meeting would undoubtedly be of much value and it is hoped that all secretaries of societies will make it a point to be present and be ready to express their ideas.

DIRECTORY AND CALENDAR OF MEDICAL SOCIETIES

Information is not complete. Secretaries of societies are urged to send in full data so that it may be known when the societies of the state meet; also the names of the officers directing their activities this year should be known.

MISSISSIPPI STATE MEDICAL ASSOCIATION: 70th Annual Session and Thirty-fourth Annual Session of the House of Delegates, Meridian, May 11, 12, and 13, 1937.

Adams County Medical Society: W. K. Stowers, Natchez, president; F. S. Dixon, Natchez, secretary. Meets third Tuesday, each month; Natchez, 7:30 p. m.

Amite County Medical Society: W. R. Stewart, Osyka, president. D. H. Thornhill, Crosby, secretary. Meets with Wilkinson County Medical Society, Centerville.

Central Medical Society: L. W. Long, Jackson, president; Gayden Ward, Jackson, secretary. Meets first Tuesday, each month, Robert E. Lee Hotel Roof, Jackson, 7:00 p. m., except July and August.

Claiborne County Medical Society: E. P. Jones, Hermanville, president; G. W. Acker, Port Gibson, secretary.

Clarksdale and Six Counties Medical Society: J. E. Powell, Charleston, president; N. C. Knight, Clarksdale, secretary. Meets fourth Wednesday of March and second Wednesday of November, Elks Club, Clarksdale. 2 p. m.

Clarke-Wayne Counties Medical Society: W. P. Gray, Waynesboro, president; Albert Hand, Shubuta, secretary.

Coahoma County Medical Society: I. W. Barrett, Clarksdale, president; N. C. Knight, Clarksdale, secretary. Meets second Wednesday each month, Clarksdale Hospital, Clarksdale, 1:30 p. m.

Delta Medical Society: E. T. White, Greenville, president; F. M. Acree, Greenville, secretary. Meets Second Wednesday of April and October. Rotates through five counties, 2 p. m.

Desoto County Medical Society: J. M. Wright, Hernando, president; L. L. Minor, Rt. 4, Memphis, secretary. Meets first Monday of January, April, July, October, Hernando, 10 a. m.

East Mississippi Medical Society: T. G. Cleveland, Meridian, president; Bob A. Cameron, Meridian, secretary.

Franklin County Medical Society: L. Costley, Meadville, secretary.

Hancock County Medical Society: A. P. Smith, Bay St. Louis, secretary.

Homochitto Valley Medical Society: Harrison Butler, Liberty, president; H. A. Whittington, Natchez, secretary. Meets January, April, July and October, 2 p. m.

Issaquena-Sharkey-Warren Counties Medical Society: G. C. Jarratt, Vicksburg, president; Leon S. Lippincott, Vicksburg, secretary. Meets second Tuesday, each month, Mississippi State Charity Hospital, Vicksburg.

Jackson County Medical Society: W. J. Weatherford, Pascagoula, president; R. G. Lander, Pascagoula, secretary. Meets second Thursday of March, June, September, Pascagoula, 7 p. m.

Jefferson County Medical Society: W. T. Harper, Fayette, secretary.

Newton County Medical Society: V. L. Henton, Decatur, president; Dudley Stennis, Newton, secretary.

North Mississippi Medical Society: R. G. Grant, Holly Springs, president; A. H. Little, Oxford, secretary.

Northeast Mississippi Thirteen Counties Medical Society: L. L. McDougal, Booneville, president; A. J. Stacy, Tupelo, secretary. Meets third Tuesday, March, June, September and December.

Pike County Medical Society: J. L. Bauer, McComb, president; Elise Rutledge, McComb, secretary. Meets first Thursday, each month, McComb, 6:30 p. m.

Pontotoc County Medical Society: L. O. Carruth, Tupelo, R.F.D., president; O. F. Carr, Pontotoc, secretary. Meets first Tuesday, each month, Pontotoc.

South Mississippi Medical Society: J. P. Culpepper, Hattiesburg, president; Carlton Temple, Hattiesburg, secretary.

Stone County Medical Society: Earl W. Green, Wiggins, secretary. Meets with Harrison-Stone-Hancock Counties Medical Society.

Sunflower County Medical Society: U. S. Wasson, Moorhead, president; H. B. Cottrell, Indianola, secretary.

Tallahatchie County Medical Society: J. G. Backstrom, Tutwiler, president; J. E. Powell, Charleston, secretary. Meets first Thursday, each month.

Tate County Medical Society: W. D. Smith, Senatobia, president; J. Sidney Eason, Coldwater, secretary. Meets second Wednesday, each month, Senatobia.

Tri-County Medical Society: D. T. Langston, New Hebron, president; R. B. Zeller, Hazlehurst, secretary. Meets March 9, Copiah-Lincoln Junior College, Wesson; June 8, Walthal Hotel, Tylertown; September 14, Riverside Hotel, Monticello; December 14, Whitworth College, Brookhaven, 12:30 p. m.

Webster County Medical Society: E. F. Arnold, Bellefontaine, president; H. K. Curry, Eupora, secretary.

Wilkinson County Medical Society: E. M. Butler, Centreville, secretary. Meets with Amite County Medical Society, Centreville.

Winona District Medical Society: P. B. Brumby, Lexington, secretary.

MISSISSIPPI HOSPITALS—CALENDAR OF STAFF MEETINGS

MISSISSIPPI STATE HOSPITAL ASS'N.

Eighth Annual Session, Meridian, May 10, 1937.

Aberdeen Hospital: Third Monday, each month, 7:00 p. m.

Anderson Infirmary, Meridian: First Friday, each month 6:00 p. m.

Biloxi Hospital: First Friday, each month, 7:30 p. m.

Bramlett Hospital, Oxford: Third Wednesday each month, 7:30 p. m.

Charleston Hospital: First Thursday, each month, 7 p. m.

Clarksdale Hospital: Second Wednesday. each month, 12 noon.

George C. Hixon Memorial Hospital: Second Monday, each month, 6:30 p. m.

Gilmore Sanitarium, Amory: Third Thursday, each month, 8:00 p. m.

Greenwood-Leflore Hospital: First Thursday, each month, 6:30 p. m.

Grenada Hospital: Second Tuesday, each month, 6:30 p. m.

Holmes County Community Hospital: Second Thursday, each month, 7:00 p. m.

Houston Hospital:Fourth Friday, each month, 7:00 p. m.

Jackson County Hospital: Second Thursday, each month except July and August, 7:00 p. m.

Jackson Infirmary: Last Tuesday, each month, except three summer months, 7:00 p. m.

King's Daughters Hospital, Brookhaven: First Tuesday, each month, 7:00 p. m.

King's Daughters Hospital, Greenville: First Wednesday, each month, 7:30 p. m.

King's Daughters Hospital, Gulfport: Third Thursday, each month, 7:00 p. m.

King's Daughters Hospital, Yazoo City: First Monday, each month, 8:00 p. m.
day, each month, 2:30 p. m.

Magee General Hospital: Twenty-fifth, each month, 6:00 p. m.

Mayes Hospital, New Albany: First Monday, each month, 2:30 p.m.

McComb City Hospital: Second Tuesday, each month, 6:00 p. m.

McComb Infirmary: Second Tuesday, each month, 6:30 p. m.

Meridian Sanitarium: Second Thursday, each month, 6:30 p. m.

Mississippi Baptist Hospital: Third Tuesday, each month, 6:30 p. m.

Natchez Sanatorium: Second Tuesday, each month, 7:30 p. m.

New Albany Hospital and Clinic: Second Tuesday, each month, 8:00 p. m.

Newton Hospital: Second Thursday, each month.

Northeast Mississippi Hospital: First Monday each month, 7:00 p.m.

Oktibbeha Hospital, West Point: Last Thursday, each month, 7:30 p. m.

Pontotoc Clinic: First Tuesday, each month, 7:30 p. m.

Rush's Infirmary: First Friday, each month, 7:30 p. m.

South Mississippi Infirmary: Last Thursday, each month, 5:00 p. m.

Tylertown Hospital: Second Tuesday, each month, 7:00 p. m.

U. S. Veterans' Hospital, Gulfport: Every Monday, Tuesday, Wednesday and Thursday, 10:45 a. m.

Vicksburg Hospital: Second Thursday, each month, 7:00 p. m.

Vicksburg Infirmary: First Wednesday, each month, 7:00 p. m.

Vicksburg Sanitarium: Tenth or week of tenth, each month, 6:30 p. m.

Water Valley Hospital: *Third Thursday*, each month, 7:30 p. m.

Winona Infirmary: First Thursday, each month, 7:30 p. m.

EIGHTH ANNUAL MEETING MISSISSIPPI STATE HOSPITAL ASS'N

OFFICERS 1936-37

President, A. M. McCarthy, M.D., Electric Mills.

Vice-President, A. Street, M.D., Vicksburg.

Secretary-Treasurer, Leon S. Lippincott, M.D., Vicksburg.

BOARD OF DIRECTORS

A. M. McCarthy, M.D., Electric Mills.
A. Street, M.D., Vicksburg.
Leon S. Lippincott, M.D., Vicksburg.
Hugh A. Gamble, M.D., Vicksburg.
V. B. Philpot, M.D., Houston.

All members of the Mississippi State Medical Association, their ladies and guests, are cordially invited to attend all sessions and the banquet.

MONDAY MORNING, MAY 10, 1937

Convention Hall, Adjoining Lamar Hotel
8:00 a.m.—Registration, Lamar Hotel.

9:00 a.m.—Call to order by the President, Dr. A. M. McCarthy, Electric Mills.

Invocation

Roll Call

Reading of minutes of last meeting

President's Address

Report of Board of Directors

Report of Secretary

Report of Treasurer

Announcements and Appointments of Special Committees

Introduction of Guests

Unfinished Business

Report of Committees—Each to be followed by Round-Table Discussions:

1. *Constitution and Rules*—Dr. W. H. Frizell, King's Daughters Hospital, Brookhaven, Chairman.

Discussion to be opened by Dr. T. M. Dye, Clarksdale Hospital Clarksdale, and Dr. J. Rice Williams, Houston Hospital, Houston.

2. *Legislation*—Dr. J. Gould Gardner, Columbia Clinic Hospital, Columbia, Chairman.

Discussion opened by Dr. J. W. Moody, Charleston Hospital, Charleston; C. F. Theobold, Biloxi Hospital, Biloxi; and Dr. B. B. Martin, Vicksburg Infirmary, Vicksburg.

3. *Membership*—Dr. W. H. Brandon, Clarksdale Hospital, Clarksdale, Chairman.

Discussion opened by Dr. E. C. Parker, King's Daughters Hospital, Gulfport; Dr. G. Y. Gillespie, Greenwood Leflore Hospital, Greenwood; and Mrs. Karenza Gilfoy, Mississippi Baptist Hospital, Jackson.

4. *Community Hospitals*—Harvey Williams, M.D., Fite Hospital, Columbus, Chairman.

Discussion opened by Mrs. J. Oridge, R.N., Holmes County Community Hospital, Lexington; Dr. A. B. Harvey, Tylertown Hospital, Tylertown; and Dr. S. E. Eason, New Albany Hospital, New Albany.

5. *Charity Hospitals*—Dr. M. Q. Ewing, Gilmore Sanitarium, Amory, Chairman.

Discussion opened by B. T. Whitfield, Corinth Hospital, Corinth; Mrs. Maud E. Varnado, R.N., Laurel General Hospital, Laurel; and Dr. J. W. D. Dicks, Natchez Sanatorium, Natchez.

6. Mental Hospitals—Dr. C. D. Mitchell, Mississippi State Hospital, Whitfield, Chairman.

Discussion opened by Dr. W. C. Pool, Cary and Dr. F. G. Riley, Dr. F. G. Riley's Hospital, Meridian.

7. Public Relations—Dr. W. W. Crawford, South Mississippi Infirmary, Hattiesburg,

Discussion opened by Dr. R. M. Flynt, Newton Infirmary, Newton,; Dr. G. A. Brown, Water Valley Hospital, Water Valley; and Dr. Henry Boswell, Sanatorium.

8. *Minimum Standards*—Dr. G. Lamar Arrington, Meridian, Chairman.

Discussion opened by Mary E. Dorsey, R.N., King's Daughters Hospital, Greenville; Dr. T. H. Rayburn, Pontotoc Clinic, Pontotoc; and Dr. P. L. Fite, Fite Hospital, Columbus.

9. *Nurses and Nursing*—Dr. A. Street, Vicksburg Sanitarium, Vicksburg, Chairman.

Discussion opened by Emma Easterling, R.N., Vicksburg Hospital, Vicksburg; Mrs. Sam Owen, R.N., George C. Hixon Memorial Hospital, Electric Mills; and Dr. W. H. Sutherland, Northeast Mississippi Hospital, Booneville.

10.*Publication*—Dr. Leon S. Lippincott, Vicksburg Sanitarium, Vicksburg, Chairman.

Discussion opened by Dr. F. J. Underwood, Jackson; and Dr. J. M. Acker, Jr., Aberdeen.

11. *Fixed Periodic Payments for Hospital Services*—Dr. H. Lowry Rush, Rush's Infirmary, Meridian, Chairman.

Discussion opened by Dr. George E. Adkins, Jackson Infirmary, Jackson; Dr. T. E. Ross, Methodist Hospital, Hattiesburg; and Dr. L. B. Morris, Macon Hospital, Macon.

12. *Hospital Taxation*—Dr. Robert W. Smith, King's Daughters Hospital, Canton, Chairman.

Discussion opened by Dr. J. R. Hill, Corinth; Dr. J. W. Barksdale, Jackson Infirmary, Jackson; and Dr. B. B. Martin, Jr., Vicksburg Infirmary, Vicksburg.

13. *National Hospital Day*—Dr. F. B. Long, Oktibbeha Hospital, Starkville, Chairman.

Discussion opened by Dr. F. S. Hill, Grenada Hospital, Grenada; Dr. F. P. Ivy, Ivy Hospital, West Point; and Dr. W. H. Anderson, Booneville.

14. *Hospital Staff Rules and Regulations*—Dr. Gilruth Darrington, King's Daughters Hospital, Yazoo City, Chairman.

Discussion opened by Dr. M. H. McRae, McRae Hospital, Corinth, Dr. B. Z. Welch, Biloxi Hospital, Biloxi; and Dr. R. B. Stevenson, City Hospital, Lumberton.

New Business.

Reports of Special Committees.

Report of Nominating Committee and Election of Officers.

Recess for Lunch.

MONDAY AFTERNOON, MAY 10, 1937

2:00 p. m.

Dr. A. M. McCarthy, President, Presiding.

1. The Hospital Laboratory—Miss Kitty McKee, Assistant Director of Laboratory, Norwood Hospital, Birmingham, Alabama.
2. *Arkansas Hospital Association*
3. *Louisiana Hospital Association.*
4. *Hospitalization Insurance*—Dr. Bert W. Caldwell, Executive Secretary, American Hos-

pital Association, Chicago, Ill.

5. *The Hospital Care of Indigent Patients in Mississippi*—Dr. J. Gould Gardner, Vice-Chairman, State Hospital Commission, Columbia.

Adjournment.

MONDAY EVENING, MAY 10, 1937
6:45—*Banquet, Lamar Hotel*

Dr. J. P. Wall, Mississippi Baptist Hospital, Jackson, Toastmaster.

SPEAKERS

Dr. A. M. McCarthy, President, Mississippi State Hospital Association, Electric Mills.

Dr. Bert W. Caldwell, Executive Secretary, American Hospital Association, Chicago, Ill.

INTRODUCTION OF OFFICERS FOR 1937-38.

RESOLUTIONS

WHEREAS the Mississippi State Hospital Association did enjoy the fellowship, cooperation, the privileges and the benefits of meeting in conjunction with the Mississippi State Medical Association, and,

WHEREAS, it is the belief of this Association that such meetings are mutually valuable in solving many problems which, especially in Mississippi, are common to hospitals and the practice of medicine,

Be it, therefore,

RESOLVED, that the Mississippi State Hospital Association does hereby extend to the Mississippi State Medical Association its thanks and appreciation for the courtesies of this valuable contact and pledges to the Mississippi State Medical Association its continued loyalty and best efforts to improve the hospitals of the state, always keeping in mind the best interests of the patient, he doctor, and the nurse.

J. P. Wall,
V. B. Philpot,
E. C. Parker,
Committee.

Unanimously adopted May 4, 1936.

MISSISSIPPI STATE PEDIATRIC SOCIETY

The annual meeting of the Mississippi State Pediatric Society will be held at the Lamar Hotel, Meridian, Monday afternoon and night, May 10.

Dr. Harvey F. Garrison, Jackson, president, states:

"This is one of the most outstanding programs on pediatrics that has ever been seen or heard at any time or place. The distinguished pediatricians who are appearing on this program are all teachers, as well as practitioners, of pediatrics. This is going to be a real treat to the medical profession of Mississippi.

"The speakers, as well as the subjects on this program, were selected primarily in the interest of the general practitioners of this state. The subjects for discussion are just such as we see in every day practice.

"Every practitioner of medicine, regardless of the type of practice in which he may be engaged, is cordially invited to attend the afternoon and night programs AS WELL AS THE BANQUET. The afternoon session begins at 1:30 p.m. The night session and banquet begins at 6:30 p.m."

PROGRAM
Afternoon—1:30 p. m.

1. Blood Transfusions, Indications, Contra-Indications, Results, Reactions, and Complications.—Edward Clay Mitchell, Professor of Pediatrics, Medical Department, University of Tennessee, Memphis, Tennessee.
2. Laryngo-Tracheo-Bronchitis.—Joseph Brennemann, Author and Teacher of Pediatrics, Chief Pediatrician, Childrens' Memorial Hospital, Chicago, Illinois.
3. Atelectasis in Children.—Paul Holinger, Bronchoscopist, Childrens' Hospital, Chicago, Illinois.
4. Nutritional Anemia in Infancy.—Robert A. Strong, Professor of Pediatrics, Medical Department, Tulane University, New Orleans, Louisiana.

FELLOWSHIP and REFRESHMENT HOUR
5:30 to 6:30 p.m.

Banquet Promptly at 6:30 *p.m.—Felix J. Underwood, Toastmaster.*

1. The Attitude of the State Health Department Toward Child Health.—Felix J. Underwood, State Health Officer, Jackson, Mississippi.
2. The Diarrheas in Children.—Lawrence R. DeBuys, President, American Academy of Pediatrics, New Orleans, Louisiana.
3. Acute Upper Respiratory Tract Infections in Children.—Joseph Brennemann, Author and Teacher of Pediatrics, Chief Pediatrician, Children's Memorial Hospital, Chicago, Illinois.

Banquet tickets will be $1.00. All who expect to attend this meeting and banquet are earnestly requested to write to Dr. Guy C. Jarratt, Vicksburg, immediately, requesting reservations for the banquet, since it is absolutely necessary that the number who will attend be known in order to make banquet reservations at the hotel.

TO THE HOSPITALS APPROVED FOR THE CARE OF CHARITY PATIENTS AND THE MEMBERS OF THE BOARDS OF TRUSTEES OF THOSE HOSPITALS

Enclosed is a list of counties with allotments to March 1, 1937, and the charges of approved hospitals against these allotments; also a list of approved hospitals and counties and the hospitals to which zoned.

Accounts paid during the month of March amounted to $19,260; total accounts paid to date have amounted to $84,792. Accounts amounting to $8,955 are being held until allotments available are sufficient to pay them.

Aside from counties zoned to the State Charity Hospitals, only seven counties of the state have not been served by approved hospitals. These counties with funds available to March 1, are: Claiborne, $987.60; Clarke, $1,599.20; George, $611.36; Jefferson, $1,161.36; Leake, $1,771.84; Madison, $2,919.04; Rankin, $1,654.32. It is probable that indigent patients from these counties are being cared for in the State Charity Hospitals.

A few points to aid all concerned:

Please be sure sufficient postage is affixed to your monthly reports. Every month several reports are received with postage due.

Please remember reports should be in the office of the secretary by the 5th of the month, Unless received by the 10th of the month, accounts must lay over until the month following for payment.

Please be sure your reports are correctly prepared and all accounts are correctly figured. Every month, there are a number of reports that must be returned because of errors or because incomplete. Some reports are beautifully prepared and correct. There are still some hospitals whose reports must be returned *every month*. Errors in accounts are often against the hospitals themselves. Errors cause delay in payment of accounts.

Funds allowed are for hospitalization. Payment can not be made for operating room expense of out-patients, not admitted to the hospital.

It is apparent that much good is being accomplished for the good of the indigent sick in Mississippi. The Commission recognizes and is grateful for the unselfish cooperation of the hospitals, their trustees, and the physicians of the state. Your suggestions will be appreciated.

With kind regards,

Sincerely yours
Leon S. Lippincott,
Secretary.

STATE HOSPITAL COMMISSION STATEMENT, JULY 1, 1936 to MARCH 1, 1937
8 MONTHS

County	Allotment 8 Months	Charges Received
Adams	$1,915.96	None
Alcorn	1,971.16	$1,987.50
Amite	1,601.92	2,352.50
Attala	2,136.76	220.00
Benton	797.44	670.00
Bolivar	5,774.16	6,942.50
Calhoun	1,469.28	1,967.50
Carroll	1,606.24	1,565.00
Chickasaw	1,728.20	1,540.00
Choctaw	1,002.72	1,457.50
Claiborne	987.60	None
Clarke	1,599.20	None
Clay	1,457.20	202.50
Coahoma	3,764.88	2,087.50
Copiah	2,569.20	410.00
Covington	1,221.28	292.50
DeSoto	2,067.28	105.00
Forrest	2,447.36	1,600.00
Franklin	996.96	80.00
George	611.36	None
Greene	865.04	None
Grenada	1,865.44	
Hancock	927.68	705.00
Harrison	3,587.36	5,087.50
Hinds	6,917.36	None
Holmes	3,095.57	1,837.50
Humphreys	2,009.68	770.00
Issaquena	466.00	392.50
Itawamba	1,481.12	562.50
Jackson	1.298.08	1,390.00
Jasper	1,514.32	160.00
Jefferson	1,161.36	None
Jefferson Davis	1,160.56	1,420.00
Jones	3,371.82	None
Kemper	1,778.24	1,825.00
Lafayette	1,623.60	2,065.00
Lamar	1,044.08	875.50
Lauderdale	4,286.72	None
Lawrence	1,013.44	845.00
Leake	1,771.84	None
Lee	2,869.84	1,527.50
Leflore	4,348.32	2,206.00
Lincoln	2,162.00	3,105.00
Lowndes	2,436.96	845.00
Madison	2,919.04	None
Marion	1,619.12	1,865.00
Marshall	2,018.04	1,020.00
Monroe	2,937.04	1,752.50
Montgomery	1,219.76	1,117.50
Neshoba	2,169.12	110.00
Newton	1,861.84	1,602.50
Noxubee	2,077.20	2,260.00
Oktibbeha	1,553.75	1,882.00
Panola	2,328.16	1,490.00
Pearl River	1,576.04	1,165.00
Perry	666.16	80.00
Pike	2,616.88	2,485.00
Pontotoc	1,790.54	2,125.00
Prentiss	1,565.60	1,747.50
Quitman	2,059.50	397.50
Rankin	1,654.32	None
Scott	1,699.69	300.00
Sharkey	1,127.76	827.50
Simpson	1,698.24	2,157.50
Smith	1,495.76	357.50
Stone	463.52	757.50

Sunflower	5,177.28	5,658.50	Warren	2,908.24	None
Tallahatchie	2,890.66	3,395.00	Washington	4,413.68	4,735.00
Tate	1,436.08	867.50	Wayne	1,242.96	10.00
Tippah	1,515.32	978.00	Webster	985.60	1,387.50
Tishomingo	1,333.68	742.50	Wilkinson	1,134.24	1,052.50
Tunica	1,725.52	10.00	Winston	1,725.08	740.00
Union	1,728.40	1,922.50	Yalobusha	1,442.48	2,497.50
Walthall	1,127.28	1,270.00	Mazoo	3,028.16	892.50

HOSPITALS	COUNTIES SERVED TO DATE — 8 MONTHS	
Aberdeen Hospital,	Monroe County	
Baldwyn Hospital,	Lee County	
	Prentiss County	
New Biloxi Hospital,	Harrison County	
Bramlett Hospital,	Tate County	Lafayette County
	Marshall County	Yalobusha County
	Panola County	Calhoun County
	DeSoto County	
Charleston Hospital,	Tallahatchie County	Quitman County
Columbia Clinic Hospital,	Lamar County	Jeff Davis County
	Marion County	Lawrence County
Columbus Hospital,	Lowndes County	
Corinth Hospital,	Alcorn County	Tishomingo County
Field Memorial Hospital,	Amite County	Wilkinson County
	Franklin County	
George C. Hixon Memorial Hospital,	Kemper County	
	Noxubee County	
Gilmore Sanitarium,	Monroe County	
Greenwood Leflore Hospital,	Leflore County	Carroll County
	Sunflower County	
Grenada General Hospital,	Panola County	Calhoun County
	Montgomery County	Carroll County
	Grenada County	Tallahatchie County
	Yalobusha County	Sunflower County
	Webster County	Choctaw County
	Attala County	Leflore County
Holmes County Community Hospital,	Holmes County	Carroll County
	Attala County	
Houston Hospital,	Calhoun County	Choctaw County
	Clay County	Oktibbeha County
	Pontotoc County	Chickasaw County
	Webster County	
Jackson County Hospital,	Jackson County	
King's Daughters' Hospital, Brookheaven,	Lawrence County	Lincoln County
	Simpson County	Copiah County
King's Daughters' Hospital, Gulfport,	Harrison County	Stone County
	Hancock County	Pearl River County
King's Daughters' Hospital, Greenville,	Washington County	Coahoma County
	Sharkey County	Sunflower County
	Humphreys County	Leflore County
	Tunica County	Bolivar County
	Issaquena County	Quitman County
King's Daughters' Hospital, Rosedale,	Bolivar County	Sunflower County
	Coahoma County	

King's Daughters' Hospital, Yazoo,	Yazoo County	
City Hospital, Lumberton,	Lamar County Covington County Pearl River County	Forrest County Jeff Davis County
Macon Hospital,	Kemper County Webster County	Noxubee County Winston County
Magee General Hospital,	Simpson County Jeff Davis County Smith County Marion County	Covington County Wayne County Prentiss County
Mayes Hospital,	Pontotoc County Union County Benton County	Tippah County Marshall County
McComb City Hospital,	Pike County Amite County Lawrence County.	Walthall County Lincoln County
McComb Infirmary,	Amite County Lincoln County Lawrence County	Pike County Walthall County Franklin County
McRae Hospital,	Alcorn County Tishomingo County	Tippah County
New Albany Hospital,	Union County Marshall County	Tippah County Lafayette County
Newton Infirmary,	Newton County Jasper County	Scott County Neshoba County
Northeast Mississippi Hospital,	Prentiss County Alcorn County Tishomingo County	Tippah County Itawamba County
Oktibbeha Hospital,	Webster County Choctaw County Oktibbeha County Montgomery County Noxubee County	Winston County Lowndes County Attala County Clay County
Oxford Hospital,	Lafayette County Tate County Calhoun County Yalobusha County Pontotoc County	Panola County Tallahatchie County Tippah County Marshall County Benton County
Pontotoc Hospital,	Pontotoc County	Calhoun County
Poplarville Hospital,	Stone County Pearl River County	Hancock County Forrest County
South Mississippi Infirmary,	Marion County Jeff Davis County Covington County Perry County	Lawrence County Winston County Forrest County Jasper County
Tupelo Hospital,	Pontotoc County Itawamba County	Lee County
Tylertown Hospital,	Walthal County Jeff Davis County Lawrence County	Pike County Marion County Amite County
Water Valley Hospital,	Lafayette County Yalobusha County	Panola County
Winona Infirmary,	Montgomery County Webster County Grenada County	Carroll County Choctaw County

ZONED COUNTIES

Adams County—To Natchez Charity Hospital.

Calhoun County—To Houston Hospital.

Choctaw County—To Oktibbeha Hospital, Starkville.

Hinds County—To Jackson State Charity Hospital.

Jones County—To Laurel State Charity Hospital.

Lafayette County—To Bramlett Hospital and Oxford Hospital, Oxford.

Lauderdale County—To Matty Hersee Hospital, Meridian.

Union County—To Mayes Hospital and New Albany Hospital, New Albany.

Warren County—To Vicksburg State Charity Hospital.

Webster County—To Houston Hospital.

Only hospitals specified above should receive charity patients from the zoned counties.

STATE BOARD OF HEALTH

Mr. John A. Lomax, curator of folk songs for the Library of Congress, visited the State Board of Health in March. Several midwives who gathered in the office of Miss Mary D. Osborne, Supervisor of Child Hygiene and Public Health Nursing, sang their original midwife songs, "Why Does the Midwife Clean Her Nails?" and "We Put Drops in the Baby's Eyes Whether the Mother Laughs or Cries." These and other songs were recorded by Mr. Lomax to be preserved in the Library of Congress.

The State Child Health Day Committee, appointed by Governor Hugh White, met on March 17 at the instance of Dr. Felix J. Underwood, chairman. The Committee, composed of men and women, representing the various civic and social organizations of the state, discussed plans for a year-round program for child health as well as plans for the specific celebration of Child Health Day.

Dr. Halbert L. Dunn, Chief Statistician for Vital Statistics of the Bureau of the Census, was a visitor in the Department of Vital Statistics in Jackson, March 25 and 26. Dr. Dunn was on a tour of inspection of State Departments of Vital Statistics, and included Mississippi in his itinerary. He was accompanied from Montgomery, Alabama, to Jackson by Mr. Leonard V. Phelps, State Registrar of Vital Statistics, of Alabama.

Dr. Dunn praised the progressive steps taken the past few years to modernize the Vital Statistics Department of the State of Mississippi.

Dr. Underwood attended the closing discussion of Dr. Robert A. Strong's lectures on pediatrics in Amory March 26.

Dr. Felix J. Underwood, Mrs. Eva Moore Adams, and Miss Mildred Davis of the State Board of Health and Mrs. Mary Lou Griffin, of the Monroe County Health Department, visited the Lauderdale County Health Department and attended the syphilis clinic March 29.

Eva Moore Adams, Supervisor of Health Education, made a number of talks over the state last month concerning the health education program. Among the groups Mrs. Adams spoke to were: the Federated Women's Clubs over WJDX; the Mississippi Section of the American Association of University Women at M.S.C.W.; the Pelahatchie Culture Club at Pelahatchie; the Lion's Club at Brookhaven; and the Parent-Teachers Association at Forest Hill.

The March radio program featured Dr. Felix J. Underwood, Dr. A. L. Gray, Supervisor, Epidemiological Unit, and Dr. A. B. Perry, Director, Jones County Health Department, Laurel. Dr. Underwood gave two talks, one on "Public Health and the Venereal Diseases" and the other on "Conquering Syphilis." Dr. Gray, speaking on communicable disease control, used the pertinent title of "Where Did I Get It?" Dr. Perry discussed "What Is a Full-Time County Health Department?"

A new sanitary district has been organized in six counties of the Delta flood-stricken area. These counties are Tate, Tunica, Tallahatchie, Panola, DeSoto, and Quitman. Mr. H. C. Taylor has been assigned as the district sanitation supervisor in charge of this district. In each of the counties there will be a county sanitation supervisor under Mr. Taylor's direct supervision. These supervisors are: H. M. Jones, Panola; I. S. Bass, Tunica; Herbert Moore, DeSoto; F. H. Tucker, Tate; Roscoe Armisted, Quitman; and J. R. Thompson, Tallahatchie.

These men, under the supervision of the Division of Sanitary Engineering of the State Board of Health, will conduct a general sanitary clean-up program with special reference to health hazards created by overflows and back waters in this area. In addition to this they will initiate in these counties a general health program, including community and school sanitation, milk and water improvements, municipal inspection, and malaria control, in an effort to improve general health conditions in this portion of the Delta.

This program, made possible through Flood Relief Funds, will last for six months and will greatly improve sanitation in these counties.

Dr. W. S. Leathers, Dean of the Medical School and Head of the Department of Preventive Medicine and Public Health, Vanderbilt University, Department of Medicine, was guest speaker of the Central Medical Society in Jackson, March 2. Dr. Leathers' title was "Significant Public Health Trends in Mississippi."

On March 11, Dr. L. L. Williams, Senior Surgeon of the U. S. Public Health Service, visited the State Board of Health. He was particularly interested in malaria control work and offered technical advice on the subject of malaria.

Dr. Underwood appeared on the program of the Clarksdale and Six Counties Medical Society on March 24. He discussed "Public Health and the Venereal Diseases."

Jackson, Felix J. Underwood,
April 5, 1937. Executive Officer.

A WORD OF PRAISE AND CONGRATULATIONS TO THOSE WHO ARE DESERVING

I have had cards from you asking for a report to your medical journal. This time I am responding as it was addressed to our hospital (East Mississippi Insane Hospital).

First, take notice that the legislature *rightfully* changed its name to the East Mississippi State Hospital in 1928; and we really treat most every type of sickness.

We are delighted to have the State Medical Association meet here in our city, Meridian. We feel that all arrangements are being made to take care of our visitors, and at this time I wish to invite the full membership to visit our hospital and decide for themselves its usefulness to Mississippi.

I want to speak a word of praise for our present president, Dr. H. F. Garrison, who has performed his duties so outstandingly.

I also want to commend the Council and other officers for their faithful and efficient services rendered to the Association.

Last, but not least, I want to congratulate the Association for having elected Dr. W. L. Little, president-elect, who will preside this next year, and I offer my meagre support to him and to all of the officers to help carry on the good work of the Association for the next year.

Meridian, J. S. Hickman,
April 2, 1937. Superintendent,
East Mississippi State Hospital.

MISSISSIPPI STATE MEDICAL ASSOCIATION

Treasurer's Report Medico-Legal Fund December 31, 1936

BALANCE ON HAND AS SHOWN BY LAST REPORT			$12,793.01
RECEIPT			
March 30—Interest—			
U. S. No.1023C	$ 15.00		
No. 1024D	15.00		
	30.00		
Less: Bank Chg.	.15	$ 29.85	
June 17—Interest—			
Wayne County No. 1	25.00		
Lauderdale County No. 2	25.00		
U. S. No. 35593	16.25		
No. E00053085	10.00		
J00169839	20.00		
K00169840	20.00		
A00168841	20.00		
A00183841	20.00		
B00183842	20.00		
C00193843	20.00		
	196.25		
Less: Bank Chg.	.40	195.85	
August 20—			
Meridian Bank No. 16	12.50		
Less: Bank Chg.	.20	12.30	
October 19—Interest—			
U. S. No. 10123C	15.00		
10124D	15.00		
35593C	16.25		
	46.25		
Less: Bank Chg.	.15	46.10	
December 21—			
T. M. Dye, Sec'y.		929.00	
TOTAL RECEIPTS			1,213.10
TOTAL AVAILABLE FUNDS AND SECURITIES			14,006.11
DISBURSEMENTS			
May 23—			
Bonk of Clarksdale Box Rent		5.00	
June 3—			
J. H. Johnson & Co. 2-3 Bank Prem		50.00	
Sept. 3—			
Dr. F. J. Underwood, Secy. acct. Medical Education Extension Fund		1,500.00	
TOTAL DISBURSEMENTS			1,555.00
BALANCE IN MEDICO-LEGAL FUND			$12,451.11

Treasurer's Report Association Fund
December 31, 1936

BALANCE ON HAND AS SHOWN BY LAST REPORT		790.27
RECEIPTS		
Sept. 1, 1936—T. M. Dye, Secy	1,750.00	
Dec. 31, 1936—T. M. Dye, Secy	541.88	
TOTAL RECEIPTS		$2,291.88
TOTAL AVAILABLE FUNDS		3,082.15

DISBURSEMENTS—

March 27—Dr. L. S. Lippincott Editor's Expense acct.	75.00	
May 28—Jos. F. Ellis, Audit Treasurer's Report	15.00	
May 28—Mrs. Bertha C. Anderson, Reporting Meeting	150.00	
June 3—Dr. J. W. Lucas, Councilor's Expense acct.	15.50	
June 3—The Mississippi Doctor, Journal for 926 members for Jan., Feb. and March	208.35	
June 3—Dr. Daniel J. Williams, Councilor's exp. acct.	10.87	
June 3—Dr. R. B. Caldwell, Councilor's exp. acct.	16.39	
June 3—Dr. L. L. Minor, Councilor's exp. acct.	13.50	
June 3—Dr. Leon S. Lippincott, Editor's exp. acct.	75.00	
June 3—Dr. T. J. Brown, Councilor's exp. acct.	12.00	
June 3—Dr. J. R. Hill, President's Expense allowance	100.00	
June 3—Dr. W. H. Frizell, Councilor's exp. acct.	25.00	
June 3—Greenville Hotel, Room, Dr. Morris Fishbein	5.10	
June 3—Dr. E. LeRoy Wilkins, Refund for cash paid to Miss Autense Yarborough, Registrar, Greenville meeting	12.50	
June 3—Dr. E. LeRoy Wilkins, treasurer's exp. G'ville	19.64	
June 3—J. H. Johnson & Co. 1-3 band prem.	25.00	
June 3—Clarksdale Printing Co. ptg. programs and badges	83.04	
June 17—Sue Lawlor, Reporting Section Hygiene and Public Health, Gr'ville meeting	10.00	
June 17—Dr. Felix J. Underwood, exp. Committee on Public Policy and Legislation, Greenville	166.10	
July 9—The Mississippi Doctor, 850 subscriptions for April, May and June	182.90	
Aug. 27—Mississippi Engraving Co.	23.60	
Sept. 1—L. S. Lippincott, Editor's exp. acct.	75.00	
Oct. 8—The Mississippi Doctor, Subscriptions for July, August and September	191.25	
Oct. 27.—Daily Register, acct. Transactions, 1936	200.00	
Dec. 10—Dr. L. S. Lippincott, Editor's exp. acct.	75.00	
Dec. 17—Daily Register, bal. acct. 1936 transactions	148.85	
Total Disbursements	$1,934.59	
BALANCE IN ASS'N. FUND . ..		$1,147.56

SUMMARY

Balance in Medico-Legal Fund	12,451.11
Balance in Association Fund	1,147.56
Total Treasurer's Debit	13,598.67

THOSE FUNDS ACCOUNTED FOR AS FOLLOWS:

Balance on Deposit Bank of Clarksdale		1,598.67
Securities Held:		
U. S. 44-54 No. J00169839. Int. June and Dec. 4%	1,000.00	
U. S. 44-54 No. K00169840. Int. June and Dec. 4%	1,000.00	
U. S. 44-54 No. A00169841. Int. June and Dec. 4%	1,000.00	
U. S. 44-54 No. A00183841. Int. June and Dec. 4%	1,000.00	
U. S. 44-54 No. B00183842. Int. June and Dec. 4%	1,000.00	
U. S. 44-54 No. C00183843. Int. June and Dec. 4%	1,000.00	
U. S. 44-54 No. E00053085. Int. June and Dec. 4%	500.00	
U. S. 44-46 No. 35593C. Int. April & Oct. 3¼%	1,000.00	
U. S. 51-55 No. 10123C, Int. March and Sept. 3%	1,000.00	
U. S. 51-55 No. 10124D, Int. March and Sept. 3%	1,000.00	
Lauderdale No. 24 Due '37, Int. June and Dec. 5%......	500.00	
Lauderdale No. 25 Due '37, Int. June and Dec. 5%......	500.00	
Wayne Co. 5%	500.00	
Wayne Co. 5%	500.00	
City of Meridian No. 13, Due '39, Int. Jan. and July 5%	500.00	12,000.00
TOTAL CASH and SECURITIES ON HAND		$13,508.67

ADAMS COUNTY MEDICAL SOCIETY

The Adams County Medical Society met in March at the Natchez Hotel with a good attendance. As Dr. Perry, our president, was transferred to Laurel, Dr. W. K. Stowers was elected to finish the term as president.

Dr. James C. Rice is delegate, I am alternate, and a number from Natchez will attend the meeting in Meridian.

Dr. Tandy Rice has moved to Natchez and is associated with his brother, Dr. James C. Rice.

The Homochitto Valley Medical Society and the Women's Auxiliary will meet in Natchez, April 8.

We are planning a good attendance in Meridian.

Natchez, Lucien S. Gaudet,
April 2, 1937. County Editor.

CLARKSDALE AND SIX COUNTIES MEDICAL SOCIETY

The Clarksdale and Six Counties Medical Society was called to order in the American Legion Hut at Clarksdale, March 24, at 2 p.m., by the president, Dr. J. E. Powell, for the seventieth semi-annual meeting. The secretary read the minutes of the previous meeting, which were approved as read.

Election of delegates to the State Association being the next order of business resuled as follows:

County	Delegate	Alternate
Coahoma	A. G. Everette	N. C. Knight
Quitman	E. A. McVey	A. C. Covington
Tallahatchie	J. A. Harris	H. G. Johnson
Tunica	W. H. Williams	D. G. Bardwell

The application for membershop in the Society filed by Dr. Allie M. Arrington, Clarksdale, was referred to the board of censors.

The scientific session being next in order, same was as follows:

1. The Problem of the Premature.—Dr. H. F. Garrison, Jackson.

Discussed by Dr. Quinn. Closed by Dr. Garrison.

2. Placenta Praevia.—Dr. T. G. Hughes, Clarksdale.

3. Public Health and the Venereal Diseases. —Dr. Felix J. Underwood, Jackson.

Discussed by Dr. L. B. Austin and E. L. Wilkins. Closed by Dr. Underwood.

On motion of Dr. T. M. Dye, which was duly seconded and carried, Dr. Simpson's paper was postponed until the evening session immediately preceding Dr. Adam's paper.

Remarks by Dr. Garrison.

Dr. W. H. Brandon then made a talk relative to the Mississippi State Hospital Association, explaining same and emphasizing importance of membership. He also explained the different membership groups of the Hospital Association and explained the program of the 1937 meeting.

RECESS

At 7 p.m. the Society was reconvened in the banquet hall of the Alcazar Hotel. During the banquet Dr. E. LeRoy Wilkins very ably presided as toastmaster. The following papers and talks were then given:

1. Foreign Bodies in the Food and Air Passages.—Dr. W. Likely Simpson, Memphis.

Discussed by Drs. Lipsey, Wilkins, Quinn. Closed by Dr. Simpson.

2. Plastic Surgery in the Everyday Practice of Medicine.—Dr. W. M. Adams, Memphis.

Discussed by Drs. McCool, Brandon, Simpson, Austin. Closed by Dr. Adams.

There being no further business the Society adjourned.

Clarksdale, N. C. Knight,
March 29, 1937. Secretary.

DELTA MEDICAL SOCIETY

The twenty-fifth annual meeting of the Delta Medical Society was held at Greenville, Wednesday, April 14, at the City Hall, beginning at 2:00 p.m.

The program, as announced by the secretary, Dr. F. M. Acree, Greenville, was as follows:

Business Session.

2:00 p.m. Meeting called to order by the president.

Invocation—Rev. J. W. Ward.

Announcements

Order of Business.

Scientific Session.

Paper—"The Surgical Abdomen in Children, by Dr. G. Y. Gillespie, Greenwood.

Discussion opened by Dr. L. L. Beall, Cleveland and Dr. C. J. Mancill, Indianola.

Paper—"A New Diagnostic Test for Pregnancy", by Dr. O. E. Ringold, Cleveland.

Discussion opened by Dr. J. F. Lucas, Greenville, Dr. J. W. Jackson, Belzoni.

Paper—"Our State Medical Association." by Dr. W. L. Little, Wesson, president-elect, Mississippi State Medical Association.

Paper—"Goitre", by Dr. R. C. Finlay, Glen Allan.

Discussion opened by Dr. F. M. Sandifer, Greenwood and Dr. H. A. Gamble, Greenville.

Paper—"Hypotension. The Tendency To Overlook Its Importance," by Dr. B. H. Higdon, Sunflower.

Discussion opened by Dr. W. R. Dickins, Greenwood and Dr. U. S. Wasson. Moorhead.

Paper—"Drainage as a Factor in the Treatment of Lobar Pneumonia," by Dr. Conley H. Sanford, Memphis, Tenn.

Illustrated with Lantern Slides.

Social Session

6:30 p.m. Dinner, Hotel Greenville.

8:15 p.m. "The Dark Tower," presented by Greenville Little Theatre.

Adjournment.

Dr. E. T. White, Greenville, president, presided.

EAST MISSISSIPPI MEDICAL SOCIETY

The first meeting of the fiscal year, 1937, of the East Mississippi Medical Society was held in Meridian, at the Lamar Hotel, Thursday, March 25. The meeting was opened by the president, Dr. T. G. Cleveland. After the reading of the minutes by the secretary and their approval, the following scientific program was presented:

Diagnosis and Treatment of Head Injuries.—Dr. A. M. McCarthy.

Discussion by Drs. C. J. Lewis and Leslie Rush.

Some Fundamentals of Allergy.—Dr. A. G. Bryan.

Discussion by Drs. K. O. Stingily and F. G. Riley.

Indications, Preparation and Administration of Blood Transfusions.—Dr. R. M. Flint. Discussion by Drs. T. D. Bourdeaux and W. H. Banks.

A dutch plate lunch was served to some 47 members and five guests in the Blue Room of the Hotel.

Dr. Joe Hirsch, the guest speaker from Birmingham, Ala., drew the interest of the meeting on the subject, "Diagnosis and Treatment of Coronary Occlusion," his talk being augmented with lantern slide demonstration of cases.

All members were urged to ask all unpaid members to pay their dues in to the secretary before the state meeting. The Society adjourned to hold its next meeting in Meridian in June.

Meridian, Bob A. Cameron,
April 2, 1937. Secretary.

HOMOCHITTO VALLEY MEDICAL SOCIETY

The Homochitto Valley Medical Society and the Women's Auxiliary to the Homochitto Valley Medical Society met in regular quarterly meeting at Natchez, Thursday, April 8, at 2. p.m., over White's Cafe. Dinner was served at 2 p.m.

The program, as announced by Dr. H. A. Whittington, secretary, included the following:

The Management of Patients Presenting Cardiac Symptoms—Dr. Gayden Ward, Jackson.

Discussed by Dr. T. E. Wilson, Jackson.

Mastoiditis—Dr. Lucien S. Gaudet, Natchez.

Demonstration of the Use of the Electro-Cardiograph—Dr. Homer A. Whittington.

ISSAQUENA-SHARKEY-WARREN COUNTIES MEDICAL SOCIETY

A regular monthly meeting of the Issaquena-Sharkey-Warren Counties Medical Society was held at the Mississippi State Charity Hospital, Tuesday, April 13, and after a supper served at 7:00 p.m., was called to order by the president, Dr. G. C. Jarratt, with 20 members and 4 guests present.

Papers and Discussions:—Internal Medicine.—Dr. W. K. Purks, chairman.

1. A Review of Some Facts and Theories Concerning Allergic Diseases.—Dr. John P. Henry, Memphis, Tennessee.

Discussed by Drs. Leon S. Lippincott, A. Street, H. H. Johnston, G. M. Street and W. K. Purks. Closed by Dr. Henry.

2. The Clinical Significance of Systolic Murmurs.—Dr. W. K. Purks, Vicksburg.

Discussed by Dr. L. J. Clark. Dr. Purks closed.

3. Case Report, Pneumococcic Meningitis With Recovery.—Dr. O. A. Armstrong, Vicksburg.

Discussed by Drs. W. P. Robert, and Alston Callahan.

There will be no meeting of this society in May because of the meeting of the Mississippi State Medical Association at Meridian.

For the June 8 meeting, the subject will be, "Obstetrics and Gynecology," and the committee in charge of program consists of Drs. R. A. Street, Jr., chairman; I. C. Knox, G. M. Street, J. A. K. Birchett, and B. B. Martin, Jr.

TRI-COUNTY MEDICAL SOCIETY

Tri-County congratulates Dr. Harvey Garrison, state president, and thanks him for his visits to our meetings, both as president-elect and as president. On both occasions he furnished us interesting talks of scientific interest as well as discussing the affairs of the State Association.

We look forward to the next administration with particular interest and pride as our own member, Dr. W. L. Little, will be president. Dr. Little holds a very warm place in the hearts of all of the members of Tri-County. Needless to say, we will support him in every way possible.

Dr. A. B. Harvey, Tylertown; Dr. O. N. Arrington, Brookhaven; Dr. Tom Conn, Monticello; and Dr. R. B. Zeller, Hazlehurst, are the delegates from Tri-County. They will be accompanied by Dr. Little, the president-elect, and Dr. Frizell, councilor for this district, as well as by a number of other members.

At our last meeting held at Wesson, March 9, we had very excellent and instructive papers by Dr. Leon S. Lippincott, Vicksburg, and Dr. H. R. Shands, Jackson. Dr. Lippincott's paper was illustrated with lantern slides. Unfortunately our attendance was below average due to the fact that several were attending the New Orleans Graduate Medical Assembly.

Dr. R. S. Savage, Brookhaven, is greatly enjoying his commonwealth fellowship at Tulane. He will soon resume his practice at Brookhaven.

Dr. Tom Conn's friends are glad that he is gradually recovering from the illness that kept him in the hospital for so long during December and January.

Dr. Little spent the greater part of the month of March in bed with influenza followed by two relapses.

Dr. E. H. DeBerry, Hazlehurst, has resumed his practice after an illness of two and a half weeks.

Dr. and Mrs. Oscar Eubanks, Crystal Springs, are the proud parents of a second son, born at the Baptist Hospital, March 27.

Hazlehurst, R. B. Zeller,
April 2, 1937. Secretary.

WEBSTER COUNTY MEDICAL SOCIETY

The Webster County Medical Society met in Eupora, March 29, and elected the following officers: Dr. E. F. Arnold, Bellefontaine, president; Dr. H. K. Curry, Eupora, secretary; Dr. W. H. Curry, Eupora, delegate to the state association.

Eupora, W. H. Curry,
April 2, 1937. County Editor.

DESOTO COUNTY

An old adage has it that no news is good news. So it is here this month. Our doctors are active, no illness in our families and some of us are looking forward with pleasure to the meeting in the fine city of Meridian.

You remember the figure of speech illustrated by "alliteration's artful aid." How is this? Prompt Pay from Patients Please Physicians.

This county with eleven active physicians has nine who are members of their local medical unit. One non-member recently removed to the county after an absence of several years. Two retired physicians have not practiced in a number of years.

DeSoto Countians and many others are in favor of changing the date of our state association meeting from the middle of May to the first of the same month or the last week in April. So many other attractions detract from our attendance under the present date.

Route 4, Memphis, Tenn., L. L. Minor,
April 6, 1937. County Editor.

GRENADA COUNTY

On Monday evening, March 15, the doctors of Grenada and Grenada County were invited to a six o'clock dinner at the home of Dr. T. J. Brown, the occasion being the anniversary of Dr. Brown's 75th birthday. Following the dinner there were impromptu speeches of felicitations from each of the doctors present, all of whom spoke of the many virtues and fine traits which have characterized Dr. Brown throughout his long and useful career, not only as a beloved physician, but as a useful and outstanding citizen of Grenada. Dr. and Mrs. Brown responded in appreciation.

Since locating in Grenada in January, 1890, Dr. Brown has been a prominent figure, not only in Grenada County, but has contributed most generously of his talents, in the medical affairs of the state. It can be said of Dr. Brown that he has wrought well and it should be a source of satisfaction to him, as he looks back over the vista of years, that he has led a life of usefulness and of splendid achievement. Every wish for many more happy anniversaries.

Grenada, J. K. Avent,
March 19, 1937.

JONES COUNTY

The majority of the physicians of Jones County have been active during the past twelve months trying to secure an all-time county health unit sponsored by the Commonwealth Fund of New York. We feel that we are very fortunate in securing this unit and at the present time we have Dr. A. R. Perry with five helpers and they are getting the work organized and on July 1 the Commonwealth Fund will join with the county and city and we will then have a full-time unit.

Dr. R. H. Cranford and his brother, Tom, of Seminary, are visiting the Mayo Clinic for a complete check-up.

Dr. Frank Ramsay, who is serving his internship in Miami, Florida, visited his parents, Dr. and Mrs. C. H. Ramsay, several weeks ago, Dr. Frank will complete his internship in July and he will make the third one of the Ramsay family active in the practice of medicine. His father, Dr. C. H. Ramsay, and his brother, Dr. Tom Ramsay, are now operating the Ramsay Clinic in Laurel.

Dr. Ottis Crocker is now with the South Mississippi Charity Hospital, Laurel. Dr. Crocker has moved his family here and he is well liked by the physicians and patients of the charity hospital.

Dr. McCarty, of Ovett, died at the Laurel General Hospital, Laurel, the early part of April. The cause of his death was pneumonia and heart complication. This leaves another small town without a physician.

Dr. B. G. Barentine is again active in his office after a severe spell of sickness.

The physicians and the many friends of that lovable Dr. Jim Jarvis are rejoicing over the fact that he is now up and again practicing after a very severe attack of flumonia.

Dr. and Mrs. J. E. Green received two communications from L. S. U. where their twin daughters, Marion and Thelma, are seniors stating that the girls had attained the highest literary honors that could be given by the university because of their excellent grades and splendid leadership at the university.

Dr. George Clayton recently returned from Hot Springs, Arkansas, where he has been a patient. He has been suffering from rheumatism.

Dr. E. C. Armstrong seems to be fully recovered from the effects of an attack of influenza and is again active in his work.

Dr. Hickerson, of the Sanatorium, held a chest clinic here. Sixty-seven people were examined. Dr. Hickerson returned later and discussed each case with the doctors of Jones County which proved to be very interesting.

Laurel, Joe E. Green,
April 14, 1937. County Editor.

LEFLORE COUNTY

Drs. L. H. Hightower and B. B. Harper, Itta Bena, spent March 2 in Jackson as guests of the Central Medical Society, and also attended the luncheon of the Vanderbilt Alumni at the R. E. Lee Hotel.

Dr. J. W. Barksdale, Jackson, visited Greenwood March 5.

Dr. R. B. Yates has returned from Hot Springs very much improved.

Dr. W. E. Denman has returned from Sanatorium, well, and ready for active work again. Since returning he has visited relatives in Arkansas and in Memphis, where his son, W. E., Jr., is finishing his course in medicine.

Dr. and Mrs. W. B. Dickins and daughter, Marion, spent Sunday, March 7, in Winona, where they met their daughter, Dorothy, who was returning from the University of Chicago, where she received her Ph.D. degree. She is with the Experiment Station of Mississippi State College.

Dr. C. N. D. Campbell, Greenwood, is now in Cruger, practicing during the absence of Dr. A. D. Chester, who is in New Orleans taking a post-graduate course.

Drs. J. C. Adams, S. L. Brister, Jr., and L. B. Otken, and their wives attenaed the meeting in New Orleans of the Southern Medical Assembly, March 8.

Dr. Geo. Baskervill spent the week end, March 13-15, in Alexandria, La.

Drs. J. W. Lucas, Jr., and R. E. Wilson, Greenville, and Paul Wilson, Clarksville, Tenn., were recent visitors to Greenwood.

Dr. and Mrs. A. F. Charlton, Berclair, visited relatives in Nashville, MMarch 16.

Drs. S. L. Brister, Jr. and G. Y. Gillespie, Jr., were recent visitors in Memphis.

Quite a number of our doctors and their wives are planning to attend the meeting of our State Association in Meridian in May.

We appreciate the work done by our retiring officers, and extend our best wishes and hearty support to Dr. W. L. Little, the incoming president.

Greenwood, W. B. Dickins,
April 5, 1937. County Editor.

SUNFLOWER COUNTY

Dr. and Mrs. W. H. Weeks, Doddsville, have returned home after a pleasant winter vacation spent in touring through Mexico.

Dr. D. T. Meriwether, who formerly practiced in Senatobia, has now established an office in Doddsville, where he is residing with his wife and two children.

Dr. G. J. Mancill and Dr. W. J. Lusk have returned from New Orleans where they have been for the past three months on Commonwealth scholarships. Dr. S. D. Newell, who is in New Orleans on a scholarship, will remain another month.

The doctors of Sunflower County met in the home of Dr. W. H. Weeks on the night of March 29 for the purpose of organizing a county medical society and for the discussion of an antiluetic program. Dr. U. S. Wasson was elected president of the organization and Dr. H. B. Cottrell, secretary-treasurer.

Dr. J. A. Clark has installed modern x-ray equipment in his office and states that this greatly aids him in his practice of medicine.

Dr. B. H. Booth is equipping his office with a clinical diagnostic laboratory as well as basal metabolism machine and lamps for lamp therapy.

Indianola, H. B. Cottrell,
April 5, 1937. County Editor.

TATE COUNTY

As members of the State Medical Association and the various county medical societies, we should, one and all, send our personal appreciation to our president, Dr. Harvey F. Garrison, for his untiring efforts and one of the most constructive and successful years in the history of our State Medical Association.

In addition, we should pledge our whole hearted support to our incoming president, Dr. W. L. Little, as well as to all the other officials of the State Medical Association, all of whom have worked so faithfully to make the past year one of success and progress.

Tate County has 100 per cent membership in the county medical society. The officers for 1937 are: W. D. Smith, Senatobia, president; John C. Powell, Coldwater, vice-president; J. Sidney Eason, Coldwater, secretary and treasurer; H. F. Byars, Senatobia, delegate.

We hope to meet more regularly in the future than we have for the past two years.

This is the first article to appear from Tate since the death of our mutual friend, Dr. J. W. Thompson, Independence, who died December 25, 1936, at Sanatorium. In his death the profession lost a true and faithful member and the territory that he served so faithfully lost a real friend and advisor, who will be missed for years to come. Our sympathy goes out to his devoted wife who remains in their home in Independence.

We have just completed the first month of an intensive vaccination campaign and hope to get this work as near 100 per cent as possible before we complete it for the year. We have a county nurse, Miss Irene Boon, who will remain in the county for six months at least to carry on this and other important work.

Hoping to attend the meeting at Meridian in May and see many friends whom we have not had the pleasure of seeing for some years past.

Coldwater, J. Sidney Eason,
April 2, 1937. County Editor.

WARREN COUNTY

Some words thoughtfully framed and fitly spoken, run in this way—"They *never* taste who always drink; they always talk who never think." Not as a matter of fact or by simile, or by metaphor, is this applicable to the doctors who from Louisiana and Mississippi composed the body who attended at Vicksburg the meeting of the Louisiana-Mississippi Ophthalmological and Otolaryngological Society. Reports reach us that they had a most enjoyable meeting and their deliberations were serious and scientific.

This month the "Natchez Trail" found doctors Leon, Edley and Mike as "Rotary Ambassadors" of "Good Will" from the "Tribe" of Fort Nogales to the tribe of Fort Rosalie, and to those who had journeyed from afar. These "Three Musketeers" of Esculapian Classification report a satisfactory conference of the seventeenth district of Roary when the objects of Rotary were exemplified not in spoken words alone, but in fellowship and service.

We find ourselves not so eager to gather news today, but rather to be of a reminiscent mood, not momentarily so intensely interested in the stirring and potential events of the present, as are we in awakening happy memories of an irrevocable past. This pervading sentiment, sorrow, or melancholia possesses us since depressing and disconsolate word comes to use of the death of Dr. W. D. Hubbard, of Florence, Ala.; a dear intimate friend and associate of yesterday years. Sometime about the year 1900 Hubbard as we then fondly called him, having graduated from the college of Physicians and Surgeons, Chicago, came to West Point, and located to practice medicine. He was a native of Kansas, but he elected to come south. In a year or so after coming to West Point he married Miss Allie May Walton, a charming southern girl of a noble parentage. In 1907 Hubbard and myself formed a partnership for the practice of medicine in West Point. We founded the first little hospital of that city, in fact one of the few then being operated in our state. Ill health came to your writer and he, broken in health if not in spirit, had to give up this promising affiliation. Hubbard soon after moved to Birmingham and thence to Florence, Alabama, and only once or twice since have we met as friends. Hubbard's father was a "damn yankee", a "Jayhawker" in the war of the states, from Kansas. My father was a "damn rebel," a cavalryman under Nathan Bedford Forrest. Nevertheless Hubbard and I formed a partnership and most pleasant and congenial were our professional, business and social relationships through this period of two or more years until "a malady prayed on my body that no medicine could be reached." In those years Hubbard was most active in organized medicine; he was faithful in attending county and state medical meetings, frequently preparing and reading papers, and for this bit of service we are assuming *The Mississippi Doctor,* and the Mississippi doctors will pardon us for these brief personal recollections of a doctor who left us many years ago, and who now has said his last adieux. We hope, if not opine, that some future day when the historian of our medical society shall write upon his scroll of honor the names of those Mississippi doctors who did their part well, he will include the name of Dr. W. D. Hubbard.

We, knowing full well his untiring energy and faithful service in all undertakings, think we hear him answer his Pilot's Call by saying:

"Master, I've filled my contract, wrought in
Thy many lands:
Not by my sins wilt Thou judge me, but by
the work of my hands.
Master, I've done Thy bidding and the light
is low in the West,
And the long, long shift is over—Master,' I've
earned it—Rest."

Vicksburg, Dr. H. T. Ims,
April 12, 1937. County Editor.

WEBSTER COUNTY

We are very proud of the very capable officers of the Mississippi State Medical Association and feel sure that their efforts will make our meeting in Meridian a very pleasant and instructive one.

The doctors of Webster County have been comfortably busy and we are anxious to see a good attendance from our county at Meridian in May.

Eupora, W. H. Curry,
April 2, 1937. County Editor.

WINSTON COUNTY

Dr. E. L. Richardson spent the week end with home folks from New Orleans.

Dr. T. C. Suttle was in the city on business this week.

Dr. W. B. Hickman took his wife to a New Orleans Hospital for treatment last week end.

Mrs. M. L. Montgomery with our son, Marion, Jr., visited Jackson at the State Band Contest last week. Marion, Jr., took part in the contest being a bass drum player. Our band rated excellent in marching and also in the music contest which we appreciate.

Dr. and Mrs. W. W. Parks made a trip to Jackson a few days ago.

Dr. J. H. Wadkind, county health officer, was on the streets this week.

Louisville, M. L. Montgomery,
April 14, 1937. County Editor.

HOSPITAL STAFF TRANSACTIONS

Houston Hospital Staff Meeting

The Houston Hospital, Houston, held its regular monthly staff meeting in the lobby of the Hospital, Friday night, March 26, at 7:30 p.m.

While the supper was being served, Miss Grace Philpot rendered a lovely program of vocal solos. She was accompanied at the piano by Mrs. Charlie McCraine, of Houston.

The program for the evening consisted of "Foreign Bodies in the Eye, Ear, and Nose," Dr. G. G. Armstrong, Houston; and "The Relation of the Radiologist to the General Practitioner," Dr. J. Rice Williams, Houston. Both of these interesting papers were discussed by the doctors present, after which the meeting was adjourned.

Houston,
March 29, 1937.

Vicksburg Sanitarium

A regular monthly meeting of the Vicksburg Sanitarium was held, Monday, April 12, and after a supper served at 6:30 p.m. was called to order by the president, Dr. George M. Street, with thirteen members and three guests present. The program included:

Reports from Records Department and Analysis of the Work of the Hospital.

Report of Vital Statistics.—Dr. F. Michael Smith, Director, Warren County Health Department.

SPECIAL CASE REPORTS:

1. Fibro-leiomyoma of Uterus.—Dr. J. A. K. Birchett, Jr.

Discussed by F. M. Smith.

2. Acute Hemorrhagic Nephritis (2 cases).—Dr. G. C. Jarratt.

Discussed by Drs. J. A. K. Birchett, Jr.; George Street and R. A. Street, Jr.

3. Puncture Wound of Left Thorax and Lung With Fracture of Ribs; Recovery.—Dr. R. A. Street, Jr.

Discussed by Drs. George Street and F. M. Smith.

Demonstration of Selected Radiographic Studies: Impacted Fracture of Head of Radius; Arthritis of Shoulder Joint; Congenital Syphilis of the Long Bones (two cases); Bronchiectasis; Pulmonary Tuberculosis (two cases); Hydronephrosis.

Three-Minute Report of Literature of the Mouth:

1. Dr. L. S. Lippincott.—Diarrhea Due to Organisms Suggestive of Paratyphoid.
2. Reactions Following Intravenous Injections of Gum Acacia.—Dr. J. A. K. Birchett, Jr.
3. The Use of Sucrose Solution in Brain and Skull Injuries.—Dr. R. A. Street, Jr.
4. Faucial Diphtheria Stimulating Peritonsillar Abscess.—Dr. Hugh H. Johnston.

Next meeting of the staff will be held Monday, May 10, 1937.

ABSTRACT: PUNCTURE WOUND OF LEFT THORAX AND LUNG WITH FRACTURE OF RIBS; RECOVERY

R. A. Street, Jr., M.D.

White, female, age 11; admitted to the Sanitarium, March 11. History showed child had been caught on the door of a car while crossing the street a few minutes before being brought to the hospital and sustained an injury of the left posterior chest wall. Examination showed extensive laceration of left thoracic wall posteriorly and laterally, the wound extending into the pleural cavity and lung, which protruded with each respiration. Great difficulty was experienced in taking each breath and considerable pain. Immediately taken to operating room; given 1/8 grain of morphine by hypo. Infusion of 5 per cent glucose solution immediately started. Gas and ether anaesthesia. Found that the 6th, 7th and 8th ribs were fractured and several large spicules of bone were removed. There was a laceration of the lung in the left lower portion about 2 inches long and bleeding freely. This was repaired with chromic catgut. Two large drainage tubes were placed in the pleural cavity and anchored with silk worm sutures. It was impossible to repair torn pleura and the wound was closed loosely with several silkworm sutures after being carefully debrided. Condition very grave immediately after operative procedures. Combined tetanus and gas gangrene antitoxin. Relatives were typed immediately for blood transfusion and the next day 500 c.c. of citrated blood was given. Placed under oxygen tent because of marked cyanosis. Patient had received inhalations of carbon dioxide and oxygen throughout the first night for cyanosis and thready pulse. The oxygen seemed to cause improvement. There was a large amount of blood-tinged serous discharge from the wound and the drainage tubes. Liquid nourishment was retained fairly well but other food was refused. Condition remained about the same for several days and oxygen was continued. March 14, oxygen discontinued several times but it was always necessary to resume its use. Drainage was still profuse and had become more serous with a small amount of purulent drainage. Oxygen discontinued the next day, condition apparently being much better with little cyanosis. Retained nourishment well. Wound dressed frequently and still considerable drainage. Condition continued to improve and drainage became much less and more serous on 6th day. One tube was removed on third day, the other being left in place.

General condition continued to improve and drainage diminished. Silkworm sutures were removed on the 9th day. The second tube was removed on the 14th and the wound continued to show serous drainage. On the 17th day, after the patient had been in a wheel chair for several days, temperature began to show slight elevation and there was complaint of some discomfort. Two small Dakin tubes were re-inserted in the wound, with considerable sero-purulent drainage following. Continued to have slight elevation of temperature for several days. One of the tubes was removed the next day. Drainage was rather profuse for a few days and was definitely purulent. Roentgen ray examination of chest on April 5 showed the right lung clear but the left lung still collapsed.

Patient has improved considerably during the last week and temperature has been normal most of the time since April 9. Drainage is still purulent but not very profuse and general condition is very good. We expect to let her go home in several days. Physical examination of the lung at this time shows breath sounds coming through but high pitched. Heart sounds are normal and in normal position.

HONOR ROLL

The following have contributed to the Mississippi State Medical Association section of our Journal this month:

County Editors:DeSoto, L. L. Minor; Grenada, J. K. Avent; Jones, Joe E. Green; Leflore, W. B. Dickins; Sunflower, H. B. Cottrell; Winston, M. L. Montgomery; Warren, Dr. H. T. Ims; Webster, W. H. Curry.—8.

Societies: Clarksdale and Six Counties, N. C. Knight; Delta, F. M. Acree; East Mississippi, Bob A. Cameron; Issaquena-Sharkey-

Warren Counties; Webster County, W. H. Curry; Mississippi State Pediatric Society, Harvey F. Garrison; Adams County, Dr. Lucien Gaudet; Homochitto Valley, Dr. H. A. Whittington; Tri-County, Dr. R. B. Zeller; Tate County, Dr. J. Sidney Eason.—10.

Hospitals: Houston Hospital; Vicksburg Sanitarium.—2.

Others:Harvey F. Garrison; Mrs. W. L. Little; W. L. Little; T. M. Dye; J. P. Wall; L. L. Minor; F. M. Acree; Felix J. Underwood; Dr. J. S. Hickman.—9.

Total, 29.

Your Editors Thank You.

WOMAN'S AUXILIARY
TO THE
MISSISSIPPI STATE MEDICAL ASSOCIATION

President .... Mrs. Adna G. Wilde
Jackson
President-Elect .... Mrs. C. C. Hightower
Hattiesburg
First Vice President .... Mrs. L. B. Otken
Greenwood
Second Vice President .... Mrs. H. C. Sheffield
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Recording Secretary .... Mrs. H. C. Ricks
Jackson
Treasurer .... Mrs. J. D. Simmons
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Historian .... Mrs. Harvey Garrison, Sr.
Jackson
Parliamentarian .... Mrs. D. J. Williams
Gulfport

Councillors: Mrs. T. G. Hughes, Clarksdale, first district; Mrs. C. M. Murry, Ripley, second district; Mrs. W. H. Cleveland, Tupelo, third district; Mrs. J. K. Avent, Grenada, fourth district; Mrs. Hugh Johnston, Vicksburg, fifth district; Mrs. H. Lowry Rush, Meridian, sixth district; Mrs. J. P. Culpepper, Hattiesburg seventh district; Mrs. W. K. Stowers, Natchez, eighth district; and Mrs. J. S. Laird, Gulfport, ninth district.

Our state president, Mrs. Adna G. Wilde, of Jackson, announces that Mrs. Robert Fitzgerald, Wauwatsota, Wisconsin, president of the Woman's Auxiliary to the American Medical Association, will be guest of honor at the state meeting in Meridian. To have Mrs. Fitzgerald this year is a splendid attainment, and the auxiliary is proud indeed to welcome the national president. Mrs. Haggard, of San Antonio, Texas, president of the Auxiliary to the Southern Medical Association, agreed to be present also, but has found that she is unable to attend.

Mrs. Wilde will have returned from the Tennessee and Louisiana state meetings before coming to Meridian, and no doubt she will bring new ideas, as well as greetings from the auxiliaries of these two states. She has been active the past year in visiting the auxiliaries all over the state, solving problems, offering encouragement, and stimulating greater attendance and increased membership. Her methods have inspired growth and harmony, and have brought the members a fuller vision of the purpose of auxiliaries—that as doctors' wives they may be more understanding, enlightened and helpful through the pleasant associations the organization gives.

The beautiful new home of Dr. and Mrs. H. C. Ricks, Pine Hill Drive, was the scene Wednesday evening of one of the month's most elaborate affairs, the annual reception at which members of the Auxiliary to the Central Medical Society entertained their husbands.

About thirty couples called during the evening. Greeting guests at the door was Mrs. T. E. Wilson, gowned in a chic black mousseline de soie trimmed with white lace. She presented them to Mrs. Temple Ainsworth, president of the Auxiliary, who wore a dinner gown of white lace.

Others receiving were: Dr. Lawrence Long, president of the medical society; Mrs. Fred Hollowell, wearing a semi-formal gown of black and white print; Mrs. Carter O'Ferrall, gowned in pink chiffon; Mrs. J. A. Milne, wearing a peach organdy dinner dress; Mrs. Ricks, gowned in white embroidered organdy; and Dr. Ricks.

Mrs. Harvey F. Garrison, Sr., wearing a charming dinner gown of thistle lace, ushered callers into the dining room, where Mrs. W. E. Noblin, Sr., poured tea, and Mrs. C. F. McKenzie presided over the coffee urn. Mrs. Noblin was gowned in lavendar lace and Mrs. McKenzie wore a dinner dress of white lace.

Centering the handsomely appointed table was a silver bowl holding yellow snapdragons, yellow and orange marigolds and purple ageratum. A lace cloth was used. Tall cream-colored tapers in silver holders lighted the table, casting a pretty glow over the silver tea and coffee urns and the compotes in which mints and candies were held.

Serving a delicious refreshment course were: Mrs. Harvey F. Garrison, Jr., wearing pink crepe; Mrs. W. E. Noblin, Jr., gowned in blue lace and taffeta; and Mrs. Toxey Hall, wearing a dinner dress of rust lace.

On April 8th, 1937, at 2:30 p.m., the Homochitto Valley Medical Society had as their guests for luncheon, the Woman's Auxiliary of the Homochitto Valley Medical Society. After the luncreon, the Adams County Woman's Auxiliary met with Mrs. Lucien S. Gaudet, 314 Linton Ave., where the regular business meeting was held.

The following members were elected as delegates to the Mississippi State Auxiliary: Mrs. O. E. Benoist; Mrs. W. K. Stowers—Alternates, Mrs. Louis MaGee and Mrs. Charles Gillespie.

We are so glad to have Mrs. Gillespie join our Auxiliary. Dr. and Mrs. Gillespie are new comers in Natchez, where Dr. Gillespie is our new health officer.

It is with keen regret that we announce the death of our good kind friend and member, Mrs. R. D. Sessions on April 3rd, 1937. Our Auxiliary sustained a great loss in her passing.

A Committee was appointed to draw up resolutions on the death of Mrs. Sessions.

Dr. and Mrs. Marcus Beekman have just returned from Miami, Fla., where they spent the winter.

Mrs. Phillip Beekman is visiting relatives in New Orleans.

The Woman's Auxiliary to the South Mississippi Medical Association met in Hattiesburg on March 18 at the Forrest Hotel. The meeting was in the form of a spring luncheon with fourteen members attending. The following offi̇cers were elected during the business session:

Mrs. J. P. Culpepper, Jr., president; Mrs. W. W. Crawford, vice-president; Mrs. H. L. McLeod, ttreasurer; Mrs. B. D. Blackwelder, secretary; Mrs. L. L. Polk (Purvis), Parliamentarian; Mrs. P. E. Smith, president-elect.

Mrs. C. C. Hightower has returned from a two weeks' vacation in Texas. Mrs. Hightower is the new president of the Mississippi Auxiliary.

Erskine Ross III, the son of Dr. and Mrs. T. E. Ross, Jr., is seriously ill at the Methodist Hospital.

The right hand of Mona Lisa, painted by Leonardo da Vinci, is said to be the most nearly perfect hand ever painted.

Let us be lovers of books and let us read them, but let us not gather them with indiscriminate hands.—Ahatole France.

The wise carry their knowledge as they do their watches, not for display, but for their own use.—Sir Thomas Browne.

Nothing is easier than fault-finding; no talent, no self-denial, no brains, no character are required to set up in the grumbling business.—Robert West.

The man who has not anything to boast of but his illustrious ancestors is like a potato—the only good belonging to him is underground.—Sir Thomas Overbury.

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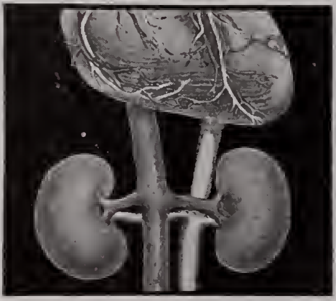

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DIARRHEA

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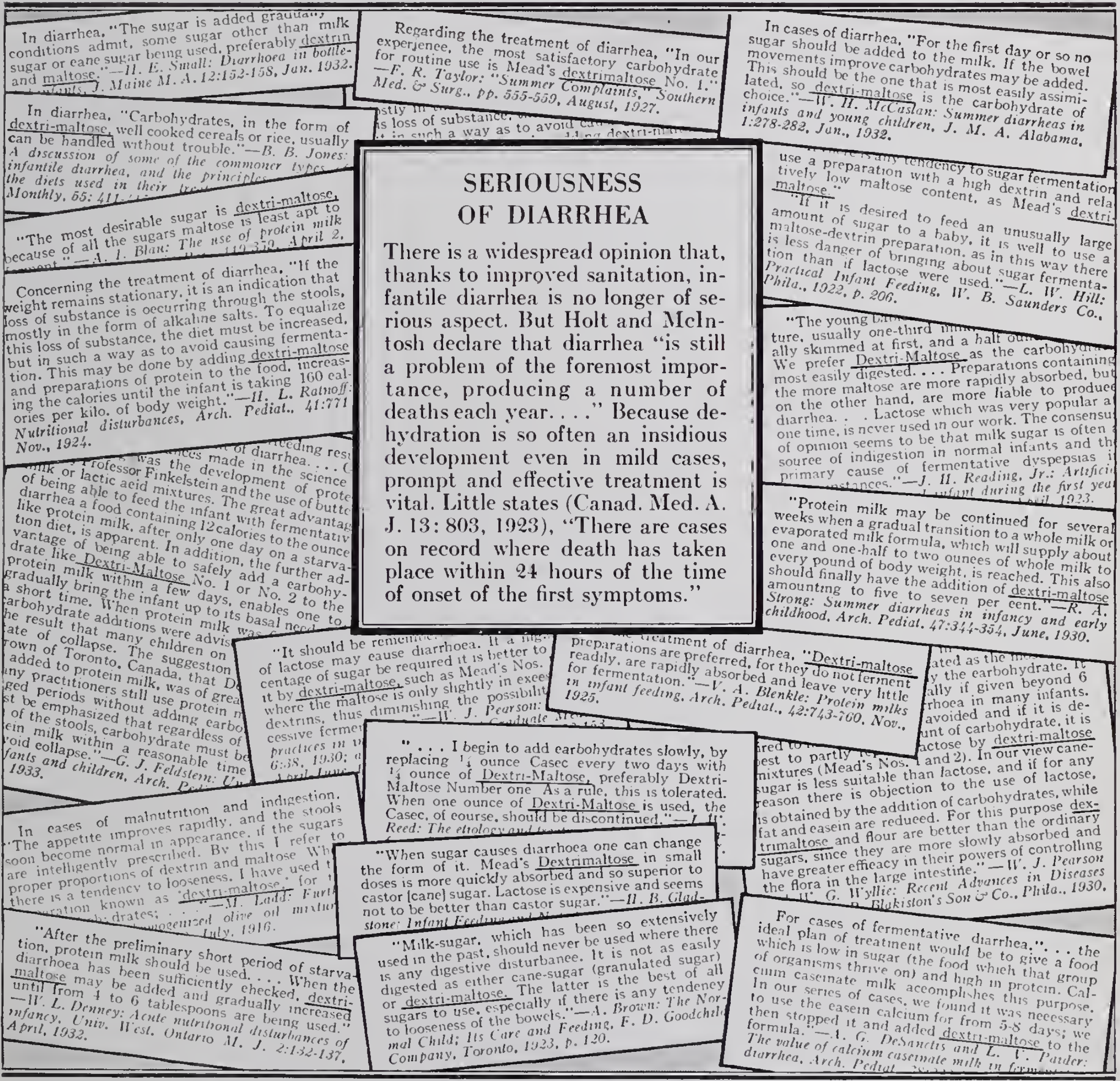
(HOLT AND McINTOSH: HOLT'S DISEASES OF INFANCY AND CHILDHOOD, 1933)

One of the outstanding features of DEXTRI-MALTOSE is that it is almost unanimously preferred as the carbohydrate in the management of infantile diarrhea.



In diarrhea, "The sugar is added gradua... conditions admit, some sugar other than milk sugar or cane sugar being used, preferably dextrin and maltose."—*H. E. Small: Diarrhoea in bottle-... infants, J. Maine M. A. 12:152-158, Jan. 1932.*

In diarrhea, "Carbohydrates, in the form of dextri-maltose, well cooked cereals or rice, usually can be handled without trouble."—*B. B. Jones: A discussion of some of the commoner types ... infantile diarrhea, and the principles ... the diets used in their trea... Monthly, 55: 411-...*

"The most desirable sugar is dextri-maltose, because of all the sugars maltose is least apt to ...ment."—*A. I. Blau: The use of protein milk ... 119-352, April 2,*

Concerning the treatment of diarrhea, "If the weight remains stationary, it is an indication that loss of substance is occurring through the stools, mostly in the form of alkaline salts. To equalize this loss of substance, the diet must be increased, but in such a way as to avoid causing fermentation. This may be done by adding dextri-maltose and preparations of protein to the food, increasing the calories until the infant is taking 160 calories per kilo. of body weight."—*H. L. Ratnoff: Nutritional disturbances, Arch. Pediat., 41:771 Nov., 1924.*

...of diarrhea. ...ceding res... ...ces made in the science ... was the development of prote... Professor Finkelstein and the use of butte... milk or lactic acid mixtures. The great advantag... of being able to feed the infant with fermentativ... diarrhea a food containing 12 calories to the ounce like protein milk, after only one day on a starvation diet, is apparent. In addition, the further advantage of being able to safely add a carbohydrate like Dextri-Maltose No. 1 or No. 2 to the protein milk within a few days, enables one to gradually bring the infant up to its basal need... a short time. When protein milk was ... carbohydrate additions were advis... the result that many children on ... state of collapse. The suggestion ... town of Toronto, Canada, that D... added to protein milk, was of grea... any practitioners still use protein m... ged periods without adding carbo... st be emphasized that regardless of ... of the stools, carbohydrate must be ... ein milk within a reasonable time ... void collapse."—*G. J. Feldstein: U... fants and children, Arch. Pe... 1933.*

In cases of malnutrition and indigestion. "The appetite improves rapidly, and the stools soon become normal in appearance, if the sugars are intelligently prescribed. By this I refer to proper proportions of dextrin and maltose. Wh... there is a tendency to looseness. I have used t... ...paration known as 'dextri-maltose,' for t... ...hydrates; ..."—*M. Ladd: Furt... ...mogenized olive oil mixtu... July, 1916.*

"After the preliminary short period of starvation, protein milk should be used.... When the diarrhoea has been sufficiently checked, dextri-maltose may be added and gradually increased until from 4 to 6 tablespoons are being used."—*W. L. Denney: Acute nutritional disturbances of infancy, Univ. West. Ontario M. J. 2:132-137, April, 1932.*

Regarding the treatment of diarrhea, "In our experience, the most satisfactory carbohydrate for routine use is Mead's dextrimaltose No. 1."—*F. R. Taylor: "Summer Complaints," Southern Med. & Surg., pp. 555-559, August, 1927.*

SERIOUSNESS OF DIARRHEA

There is a widespread opinion that, thanks to improved sanitation, infantile diarrhea is no longer of serious aspect. But Holt and McIntosh declare that diarrhea "is still a problem of the foremost importance, producing a number of deaths each year...." Because dehydration is so often an insidious development even in mild cases, prompt and effective treatment is vital. Little states (Canad. Med. A. J. 13: 803, 1923), "There are cases on record where death has taken place within 24 hours of the time of onset of the first symptoms."

"It should be remem... of lactose may cause diarrhoea. If a hig... centage of sugar be required it is better to ... it by dextri-maltose, such as Mead's Nos. ... where the maltose is only slightly in exces... dextrins, thus diminishing the possibilit... cessive fermen..."—*W. J. Pearson: ... practices in ... Graduate M... 6:38, 1930; ... April-June ... 153*

...treatment of diarrhea, "Dextri-maltose preparations are preferred, for they do not ferment readily, are rapidly absorbed and leave very little for fermentation."—*V. A. Blenkle: Protein milks in infant feeding, Arch. Pediat., 42:743-760, Nov., 1925.*

"... I begin to add carbohydrates slowly, by replacing ¼ ounce Casec every two days with ¼ ounce of Dextri-Maltose, preferably Dextri-Maltose Number one. As a rule, this is tolerated. When one ounce of Dextri-Maltose is used, the Casec, of course, should be discontinued."—*L. W. Reed: The etiology and trea...*

"When sugar causes diarrhoea one can change the form of it. Mead's Dextrimaltose in small doses is more quickly absorbed and so superior to castor [cane] sugar. Lactose is expensive and seems not to be better than castor sugar."—*H. B. Gladstone: Infant Feeding and N...*

"Milk-sugar, which has been so extensively used in the past, should never be used where there is any digestive disturbance. It is not as easily digested as either cane-sugar (granulated sugar) or dextri-maltose. The latter is the best of all sugars to use, especially if there is any tendency to looseness of the bowels."—*A. Brown: The Normal Child; Its Care and Feeding, F. D. Goodchild Company, Toronto, 1923, p. 120.*

In cases of diarrhea, "For the first day or so no sugar should be added to the milk. If the bowel movements improve carbohydrates may be added. This should be the one that is most easily assimilated, so dextri-maltose is the carbohydrate of choice."—*W. H. McCaslan: Summer diarrheas in infants and young children, J. M. A. Alabama, 1:278-282, Jan., 1932.*

...use a preparation with a high dextrin and relatively low maltose content, as Mead's dextri-maltose."

"If it is desired to feed an unusually large amount of sugar to a baby, it is well to use a maltose-dextrin preparation, as in this way there is less danger of bringing about sugar fermentation than if lactose were used."—*L. W. Hill: Practical Infant Feeding, W. B. Saunders Co., Phila., 1922, p. 206.*

"The young ba... ture, usually one-third ... ally skimmed at first, and a half ou... We prefer Dextri-Maltose as the carbohyd... most easily digested.... Preparations containing the more maltose are more rapidly absorbed, but on the other hand, are more liable to produc... diarrhea.... Lactose which was very popular a... one time, is never used in our work. The consensu... of opinion seems to be that milk sugar is often ... source of indigestion in normal infants and th... primary cause of fermentative dyspepsias i... ...stances."—*J. H. Reading, Jr.: Artifici... ...infant during the first yea... ...ril 1923.*

"Protein milk may be continued for several weeks when a gradual transition to a whole milk or evaporated milk formula, which will supply about one and one-half to two ounces of whole milk to every pound of body weight, is reached. This also should finally have the addition of dextri-maltose amounting to five to seven per cent."—*R. A. Strong: Summer diarrheas in infancy and early childhood, Arch. Pediat. 47:344-354, June, 1930.*

...ated as the mo... ...y the carbohydrate. It ...ally if given beyond 6 ...rhoea in many infants. ...avoided and if it is de... ...unt of carbohydrate, it is ...actose by dextri-maltose ...ired to ... best to partly re... and 2). In our view cane-... mixtures (Mead's Nos. 1 and 2). In our view cane-sugar is less suitable than lactose, and if for any reason there is objection to the use of lactose, ...is obtained by the addition of carbohydrates, while fat and casein are reduced. For this purpose dextrimaltose and flour are better than the ordinary sugars, since they are more slowly absorbed and have greater efficacy in their powers of controlling the flora in the large intestine."—*W. J. Pearson ... W. G. Wyllie: Recent Advances in Diseases ... Blakiston's Son & Co., Phila., 1930.*

For cases of fermentative diarrhea, "... the ideal plan of treatment would be to give a food which is low in sugar (the food which that group of organisms thrive on) and high in protein. Calcium caseinate milk accomplishes this purpose. In our series of cases, we found it was necessary to use the casein calcium for from 5-8 days; we then stopped it and added dextri-maltose to the formula."—*A. G. DeSanctis and L. V. Pader: The value of calcium caseinate milk in ferm... diarrhea, Arch. Pediat. ...*

Just as DEXTRI-MALTOSE is a *carbohydrate* modifier of choice, so is CASEC (calcium caseinate) an accepted *protein* modifier. Casec is of special value during the summer months (1) for colic and loose green stools in breast-fed infants; (2) in fermentative diarrhea in bottle-fed infants, (3) as a prophylactic against diarrhea in infections.

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